

**CONFERENCE PROCEEDINGS**  
Academic and Social Engagement  
in Higher Education  
21-23 September 2016



# **SEAAIR 2016**

## **16<sup>th</sup> Annual Conference**

Suan Dusit University  
Thailand

### **CONFERENCE PROCEEDINGS**

Academic and Social Engagement  
in Higher Education

21 - 23 September 2016





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# WELCOME

## Welcom from the President, SEAAIR

On behalf of SEAAIR, we would like to extend a very warm welcome to all participants of the 2016 SEAAIR Annual Conference in Bangkok, Thailand, in the surroundings of the royal premises and the most famous landmarks in Bangkok.

For SEAAIR 2016, 202 authors and co-authors from 10 countries submitted a total of 104 full papers that underwent rigorous review and this led to a final acceptance of 65 full papers for 2016. The 2016 Conference theme, "Academic and Social Engagements in Higher Education" highlights one of the key challenges of higher education institutions to be more attuned to faculty, student and social engagements. An engagement culture that is well instilled and embedded in our educations systems can help the bonding of faculty-students and institution-society towards a better world in the future.

SEAAIR conferences have always aimed to bring together policy-makers, academics, researchers, practitioners and managers in higher education institutions. It continues to aim to expand academic and networking relationships, provide and share new academic, cultural and learning experiences through collaborative efforts via Institutional Research. SEAAIR has grown from strength to strength over the past 16 years to provide a balance of quality academic papers and the rich culture as offered and shared by each host institution anchored in Malaysia, Thailand, Indonesia, the Philippines and Vietnam. We fully believe that SEAAIR will continue to benefit and built on the academic and cultural learning and sharing as we move past the AEC 2015.

It is hoped that everyone will enjoy the conference's learning and sharing, the local favorite hot spots, cuisine and cultural spots and the hospitality of the rich traditions and cultures of Bangkok. To add to your experience at SEAAIR 2016, the local organizing committee has worked hard to create not only an academic but also an enjoyable and memorable experience within the astounding cultural and historical but bustling Dusit area.

We sincerely thank the LOC members and team for the 2016 SEAAIR Conference to take up the challenge of hosting SEAAIR in Bangkok, Thailand and all participants who will make this conference a success.

Thank you and I remain,



Assoc. Prof. Teay Shawyun, Ph.D  
President, SEAAIR

## Welcome from the President, Suan Dusit University

The international conference endorsed by SEAAIR Association provides the opportunity for teachers, researchers, scholars and students of public and private higher education institutions to present their research in order to exchange knowledge and experiences to improve higher education institutions and everyone they serve. Suan Dusit University is honored to host this year's conference, entitled "The 16th Annual Conference of South East Asia Association for Institutional Research" with the theme of "Academic and Social Engagements in Higher Education".

This SEAAIR Conference conducts on September 21-23, 2016 at Suan Dusit University. The six sub-themes of the conference are: 1. Executing Teaching and Learning Engagements 2. Institutionalizing Academic and Social Engagements 3. Empowering Technologies for Academic and Social Engagements 4. Discovering Institutional Research in Examining Academic and Social Engagements 5. Augmenting Quality Practices to Ensure Academic and Social Engagements and 6. Enhancing Social Engagement Through Service Learning. These key issues have been selected because of their pivotal importance for both institutional and national development.

On this occasion, I strongly urge you to actively participate in this event in order to contribute to the discussions and the future innovations that are sure to follow. Through sharing knowledge and information and developing strong bonds, we create the foundations for a better academic community and better society.



(Assoc. Prof. Dr. Sirote Pholpuntin)  
President of Suan Dusit University

## Welcome from the Conference Co-Chairs

Knowledge is the true basis of higher education: its production via research, its transmission via teaching, its acquisition and use by students. The social mission of higher education depends on the quality and the benefit derived from this knowledge. However, the maintenance of research quality and excellence by higher education institutes is worthwhile only if they are to make a meaningful and effective contribution to the development of society. Therefore, our conference theme on "Academic and Social Engagements in Higher Education" shed true light on core principles of higher education institutes. The ability to ensure the academic relevancy is key function of every one in higher education. Institutions of higher education have much to learn from each other about social engagement benefits, challenges and successful strategies. Variety of approaches to social engagements are being taken, and to some degree universities are documenting and reflecting on their experiences via all the papers in this proceedings.

As the host of SEAAIR 2016 Conference, we warmly welcome all participants in, and contributors to, higher education from 10 ASEAN countries and the rest of the world to come together and share their valuable experiences that might be of use to the wider society. Authors from countries like Japan, China, Korea, Taiwan, Australia, and Ghana also take part in this conference. This proceedings contains 62 papers under six sub-themes: (1) Executing Teaching and Learning Engagements (2) Institutionalizing Academic and Social Engagements (3) Empowering Technologies for Academic and Social Engagements (4) Discovering Institutional Research in examining Academic and Social Engagements (5) Augmenting Quality Practices to ensure Academic and Social Engagements and (6) Enhancing Social Engagement through Service Learning.

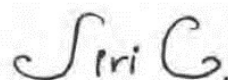
The academic quality of research papers, presented at the conference and included in this proceedings is utmost important to us. This conference uses double-blind reviews to ensure that the paper selection process is fair and unbiased. All papers accepted and disseminated via this conference proceedings required the approval of at least two third of the peer reviewers. Thus, we are certain that our thorough preparation process of this publication is well ensured.

Last, the success of any journal is built primarily on team working. In this regard, we would like to use this page to express our sincere gratitude to everyone contributed to the success of the 16th SEAAIR conference. We deeply appreciate the presence and the importance recognition of the conference by His Excellency, General Dapong Ratanasuwon, Minister of Education for Thailand at the opening ceremony. We are grateful for the dedication towards deliveries of professional works by our colleagues at Suan Dusit University. Special appreciation also goes to our key sponsors of the conference namely JESADA TECHNIK MUSEUM, Mr.Paitool Paisalsukwittaya, Mrs.Nachanok Sae-eng, SVOA Public Company Limited, Yip In Tsoi & Co., Ltd., Mr.Rajinder Singh Sachdev, and SUANDUSIT ALUMNI ASSOCIATION. Without all these supports, the success of this conference would not be made possible.

We hope you would find this conference proceedings beneficial and would bring the knowledge gained from this conference to share with other educators in the future.



Asst. Prof. Dr. Chanasuek Nichanong  
Vice President for R&D  
Suan Dusit University, Thailand  
Chairman Organizing Committee



Dr. Siri Chara-um  
Director, International Relations Division  
Suan Dusit University, Thailand  
Vice Chairman Organizing Committee

## About SEAAIR

The Southeast Asian Association for Institutional Research (SEAAIR) is a regional affiliation of the Association for Institutional Research (AIR), the world's largest professional association for institutional researchers who have more than 4,000 members. An international group of senior academics from the region formed SEAAIR and organized a conference in late 2001 that would herald the birth of the organization and would attract participants from education, government, public service and industry. The first SEAAIR Executive Committee (SEC) was elected at the inaugural conference of SEAAIR with around 100 delegates attending the conference in Kuching, Sarawak, Malaysia. Since then, SEAAIR conferences have been organized annually and a double blind reviewed proceedings has been published for each conference. The SEAAIR Executive Committee has been conscious of the fact that its membership has been drawn from a wide region and hence has deliberately rotated the conference host among Asian countries.

The major purposes of the South East Asian Association for Institutional Research are to benefit, assist and advance research leading to improved understanding, planning and operations of institutions of post-secondary education in the region. Appropriate methodologies and techniques from many disciplines are encouraged. It will encourage comparative research into national higher education systems in South East Asia. It will publish and exchange information with respect to institutions of post-secondary education with a view to illuminating current and developing issues of common concern and raising the standard of post-secondary educational management, planning and policy development at all levels.

Its aims including:

- The advancement of research leading to improved understanding, planning, and operation of institutions of post-secondary education;
- The dissemination of information and interchange of ideas on problems of common interest in the field of institutional research;
- The continued professional development of individuals engaging in institutional research, institutional management and post-secondary planning and policy development;
- The fostering of unity and cooperation among persons having interests and activities related to institutional research, management, policy and planning;
- The advancement of post-secondary education and the improvement of the quality of post-secondary educational outcomes.

SEAAIR has been addressing its aims through a number of programs and activities including:

- The annual SEAAIR conference
- Pre-conference workshops on areas of interest to members
- Electronic annual publications of two editions of its journal (JIRSEA)
- Publication of SEAAIR Newsletter or other periodical bulletins to members
- Awarding of the Best Conference Paper prize that includes a subsidized presentation of the paper at a special session of the AIR Forum in the United States
- Presenting regional meetings/workshops for members from time to time
- Liaising with other IR sister organizations including participation in the International IR Network meetings

Developing and implementing other strategies to benefit the membership as the financial position of the association strengthens in the future

- Including a good mix of keynote addresses at its annual conference representing local, regional and international speakers
- Instituting an international IR Panel at its conference to consider the conference theme from a global perspective

## Peer Reviewers

Assoc.Prof. Dr.Teay Shawyun	King Saud University, Saudi Arabia
Dr. Olivia Legaspi	Vice Chancellor for Academics and Research, De La Salle University, Philippines
Dr. Antonius Tanan	The President of Universitas Ciputra Entrepreneurship Center, Indonesia
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Dr. Koh Yit Yan	Singapore, University of Newcastle, Australia

# Conference Proceedings Board

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## Suan Dusit University

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[www.dusit.ac.th](http://www.dusit.ac.th)

## Conference Program

Time	September 21, 2016	September 22, 2016	September 23, 2016
0730 – 08.00			Annual General Meeting 2016
08.00 – 08.30			
08.30 – 09.00			
09.00 – 09.30	Registration	Registration	Presentation of 2017 SEAAIR Conference Host
09.30 – 10.00	Opening Ceremony of SEAAIR 2016 Conference	Keynote Presentation II	Travel to Suan Dusit University, Supanburi Province
10.00 – 10.30			
10.30 – 11.00	Coffee Break	Coffee Break	
11.00 – 11.30	Keynote Presentation I	Parallel Sessions	Social Engagement Village visit
11.30 - 12.00			
12.00 – 12.30	Lunch	Lunch	Lunch
12.30 – 13.00			
13.00 – 13.30	Parallel Sessions	Parallel Sessions	Activities in Social Engagement
13.30 – 14.00			
14.00 – 14.30			Visit-Shrine of the City Pillar Dragon Village
14.30 – 15.00			
15.00 – 15.30			
15.30 – 16.00			
16.00 – 17.00			Return to Suan Dusit Place Hotel
17.00 – 17.30			
1730 – 18.00	Transfer to Riverside Hotel Pier		
18.00 – 18.30		Registration for Gala	
18.30 – 19.00		Dinner	
	18.30 – 19.00	Welcome by President and Staff	
19.00 – 19.30	Dinner Cruise	Thai Performance and Gala Dinner	
19.30 – 20.00			
20.00 – 20.30			
20.30 – 21.00			
21.00 – 21.30	Return to Suan Dusit Place Hotel		
21.30 – 22.00			

## Oral Presentation Program

**Wednesday 21 September 2016**

Time	Kumarika Room	Kahla Room	Likhit 1 Room	Likhit 2 Room
1300-1320	Ma. Florecilla C. Cinches Student Engagement: Defining Teacher Effectiveness and Teacher Engagement	Yosep Undung Deconstruction of the CES Programs and Practices Using Carroll's Corporate Social Responsibility Model	Rocina Jose Aims The E-class as a Learning Tool for Political Science Students at De la Salle University-Dasmariñas	Evelyn Del Mundo Adventure Relaxation and Theatrical Therapy Among Older Persons With Depression In Selected Barangays Of Dasmariñas City, Cavite
1320-1340	Noel Pit Re-creating the Lived Experiences of Student Leaders in Strengthening a Muslim-Christian Village in Northern Mindanao, Philippines	Evelyn Magdalena Assessment of Implementation of University of Rizal System Faculty's Extension Activities	Hongwei Wang Using Web 2.0 Tools to Enhance Learning in an Industry-Based Programme	Sheila Maloles Assessing Undergraduate Students' Research Experience at De La Salle Lipa
1340-1400	Jonald Carrera Pedagogical practices of Tutors at DMMMSU Open University System	Jasmin De Silva Change Management Process Factors Affecting Attitudes of Cynicism: Assessing the Change Management Execution of a Philippine HEI	Marilou Espina Electronic Document Management System to Support Accreditation	Nora Sarmiento Entrepreneurial Capital: A Comparative Study on Entrepreneurial Attitudes and Intentions between Indonesian and Filipino Business Students
1400-1420	Teay Shawyun Faculty-Student Engagements: Dimensional Aspirants or Deterrents	Jordianne Gomez Determining Involvement Factors of School Employees in its Volunteering Programs	Manika Wisessathorn Dynamics of Internet Addiction in Thai University Students: A Qualitative-Method Investigation	Mark Airon Creus Assessment of the Student Services of De La Salle University Dasmariñas College of Education Graduate Studies: Basis for a Proposed Enhancement Program
1420-1440	Krisda Tanchaisak Students' Perception towards Proactive Learning Practices at Ramkhamhaeng University	Narat Wattanapanit The Influence of Organizational Culture on Job Performance among Personnel at a Public University in Thailand	Early Sol Gadong The Community as Laboratory: A Model for Collaborative Materials Development in Mathematics through Community Engagement	Pongtorn Sangwipark The Effects of Thai Martial Arts - Basic Muay Thai Training towards Physical Capacity of Bachelor Degree Students who Study Sport for Health Subject

# Oral Presentation Program

**Thursday 22 September 2016**

Time	Kumarika Room	Kahla Room	Likhit 1 Room	Likhit 2 Room
1100-1120	Olivia Legaspi Social Engage- ment Activities in DLSU-Dasmariñas	Sophia Shi-Huei Ho Perceptions of University Professors in Taiwan towards Institutional Resource and Social Capital: Internal and External Perspectives	Brandford Bervell 'Mediators', ' The Mediated' or 'Predictors': Re-Conceptualizing the Tripartite Role of Personality Factors in Higher Education Technology Acceptance Research	Edgar Allan Castro Effects of Organizational Learning and Collective Knowledge on Change Beliefs: A Phil. Hei's Perceptions on The Asean Economic Integration
1120-1140	Rina Angeles MOOC Camp: Build- ing Community and Continuing Profes- sional Development	Pin-Hsuan Liu HEIs Faculty's Job Satisfaction and Intention to Leave in East Asia	Staporn Tavornativat The life quality and social development for the strength community Of Donaranyick in Praksiracha District, Chainat Province	Phatteenan Suwancharoen The Effects of Multi- modal Texts on EFL Students
1140-1200	Supaporn Gumsa Relationship be- tween Free Voluntary Reading and Scientific Literacy of Students In a Bilingual Context, Thailand	Janet Jay Amboy Analysis of the School Resource Generation of De La Salle University- Dasmariñas and San Sebastian College Recoletos de Cavite: Basis for a Proposed Resource Generation Program	Marilou Espina Kattiya Kattiyawara Creative Business Store: From Local to Global .Case Study of community en- terprise of antique lamps from Pong- yangkok sub-district, Hangchat district, Lampang province	Sophia Shi-Huei Ho The Effects of Institutional and Student Engagement on the Student Learning Outcomes: Evidence from Taiwanese Private University
1200-1300	Lunch			
1300-1320	Davy Seligin Alternative Frame- work In Body Co- ordination Subtopic Science: Form Four Students in Interior Of Malaysia.	Jang Wan Ko Academic and social engagement of for- eign faculty in Korean higher education	Alvin Sario Framework of Collaboration of Disaster Risk Reduc- tion Stakeholders towards Resilient Communities	Yaw Long Chua Overview of Peer Review Assessment for Mechanical Design Process Project in Universiti Tenaga Nasional Malaysia

## Oral Presentation Program

**Thursday 22 September 2016**

Time	Kumarika Room	Kahla Room	Likhit 1 Room	Likhit 2 Room
1320-1340	Ampai Kiatchai A Study of the Effect of Project-Based Learning on Undergraduate English Majors' Learning Achievement in Teaching English Literature Course	Witaya Siripanwattana The Importance of Industry-University Linkages for the Chronological Evolution of Both Science and Technology in the West.	Josephine Marasigan Towards the Development of Bachelor of Elementary Education (Beed) Student Teaching Manual for Eastern Samar State University System	Azlida Mohamad The Effectiveness of the Implementation of Paralympic Athletic Training Module for Disabled Athletes
1340-1400	Charito Ong A Training Design for College English Teachers	Krisda Tanchaisak Factors Affecting Job Satisfaction of University's Personnel	Ma. Florecilla C. Cinches Empowering and Engaging Citizens in Communities on Climate Change Awareness and Advocacy	Joseph Angelou Ng Effect of Problem-Based Service Learning on the Civic Consciousness of Students Enrolled in the National Service Training Program of De La Salle Lipa
1400-1420	Edgar Julius Lim Collaborative Learning, Gender Groupings and Mathematics Performance	Piyathida Praditbatuga The Relationship between Student Engagement and Satisfaction at a Private University in Thailand	Susana Cabredo Integrating Service-Learning in the Graduate Business Administration Program of Aquinas University of Legazpi	João Paulo Ponciano Innovative Assessment Strategies for Student Projects
1420-1440	Melati Jilon Teachers Emancipation in Transformation of Teaching Management in the Classroom Through Action Research	Ma. Cecilia Alimen Student Satisfaction of Academic Services and Campus Climate	Paterno Alcartado Towards the Development of a Lasallian Pedagogical Model of Service Learning: The De La Salle University-Dasmariñas Experience	Sophia Shi-Huei Ho The impact of Taiwanese college students' learning motivation from self-determination perspective on learning outcomes: Moderating roles of multi-traits
1440-1500	Lunch			
1500-1520	S. Haswa Niza Abdullah What Degree Person-Academic Environment Congruence among Student Teachers' In Malaysian Public Institutions of Higher Education?	Aneline P. Tolones Time & Motion Study: Increasing the Efficiency of Employees in the University of San Agustin	Erika Joy Legaspi Opportunities for Social Engagement of Business Student Leaders	Nathee Kerdaroon The Development of Learning Management Model in Special Education Schools

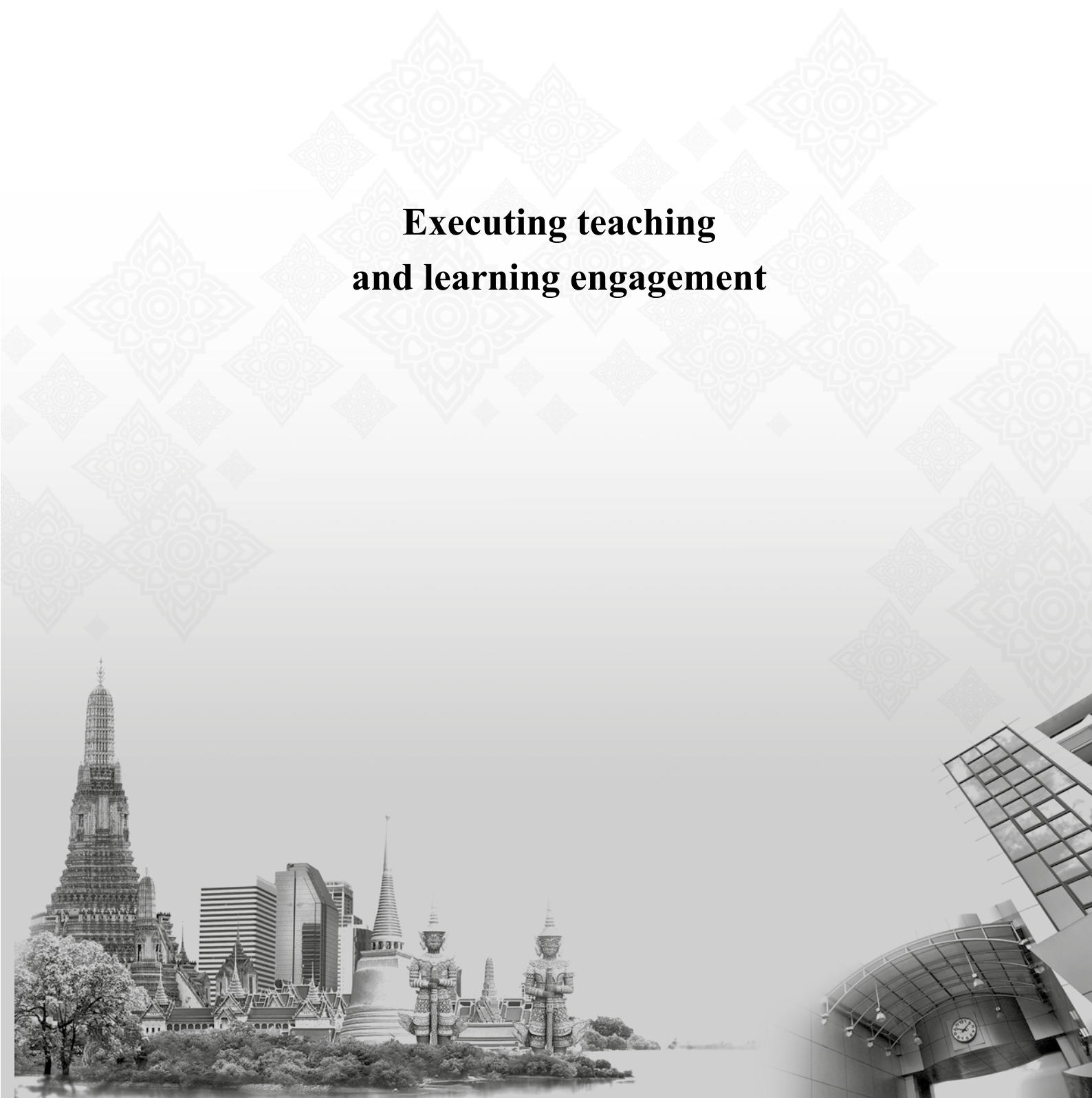
## Oral Presentation Program

**Thursday 22 September 2016**

Time	Kumarika Room	Kahla Room	Likhit 1 Room	Likhit 2 Room
1520-1540	Tajularipin Sulaiman The Use of Multiple Intelligence Approach and Alternative Assessment in Teaching	Gorgonia Siscar Organizational Politics and Psychological Empowerment: Empirical Evidence from A Private University in the Philippines	Emeliza Estimo Employee Preferences: Their Work Values, Environment, Interaction and Activities	Suzieleez Syrene Abdul Rahim The Relationship between Motivation and Passion for Learning with Self-regulated learning strategies among University Students
1540-1600				Ong-Art Naiyapatana The Effective Organizational Structure of Institutional Research Offices: Multiple Case Studies of Higher Education Institutions In Thailand



# **Executing teaching and learning engagement**





# **Student Engagement: Defining Teacher Effectiveness and Teacher Engagement**

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## **Abstract**

Teacher quality is an important predictor of student quality and student engagement is central to student quality. This study attempted to establish that student engagement is among the major defining outcomes of teacher effectiveness and teacher engagement. This assumption was verified in three higher educational institutions (HEIs) in a city of Southern Philippines. Concurrent mixed method research design using three modified survey questionnaires on the constructs were the main sources of the quantitative data while key informant interview, focus group discussions and observations were also used simultaneously for triangulation. Ninety eight (98) teachers from the three HEIs were purposively chosen and were assessed by their respective students, a combined total of 2,238. These were the available full time college teachers who were assigned during summer classes from April to May 2016. Descriptive statistics, correlations and multiple linear regressions were used and complemented with qualitative data from students. The study revealed that teacher effectiveness is a significant predictor of student engagement with teacher engagement trailing far behind. However, when taken together as one, the two teacher variables can likewise influence student engagement. This study hopes to contribute to the scanty researches in the Philippines that focused on the role of teachers as designers of learning environment to support student engagement.

**Keywords:** Student Engagement, Teacher Effectiveness, Teacher Engagement

## **Introduction**

Student engagement gained prominence recently because of its crucial role in students' success. Studies have pointed its positive link to academic outcomes such as grades, persistence, and retention (Kuh et al., 2008; Tinto, 2006). High quality learning outcomes such as gains in general abilities and critical thinking as well as greater application and deeper approaches to learning were also found to be significant outcomes of student engagement (Pike and Kuh, 2005; Zimitat and Horstmannshof, 2007; Krause and Coates 2008).

Such engagement has become the focus of attention among those aiming to enhance learning and teaching in higher education, headlining meeting agendas and theming conferences in campuses around the world (Trowler, 2010). In fact, Chen, Lattuca and Hamilton (2008) in their study admitted that the concept is now not only prominent in higher education communities; rather, these higher education institutions (HEIs) are emphasizing the role of faculty as designers of educational environments to support student engagement. The

authors as academicians continue to search for more explanations on student success considering that their respective higher education institutions are experiencing fluctuating trends of academic outcomes especially in terms of students' academic achievements, and graduates' employability.

The study of student engagement cannot miss out the major role that teachers play in influencing engagement. In fact, what they do are the key factors of materializing student engagement (Groves et al., 2015; Kraft et al., 2013; Russell & Slater, 2011; Zepke et al., 2010). Vgotsky in Chen et al. (2008) claimed that rich learning occurs when there is a good fit between these factors: the task at hand, student's ability to perform and the availability or presence of a more knowledgeable individual to provide assistance in moving the learner to the next phase of learning. The teacher is considered as one of the "more knowledgeable others" in the students' academic life.

Considering the fundamental role of teachers in students' success, this study investigated on the influence of teacher effectiveness and teacher engagement on student engagement. The expected results hope to confirm the extent of teacher behavior impact on student engagement and eventually the effectiveness of the teacher as seen in student engagement. Additionally, this study hopes to contribute to the scanty researches that focused on the role of teachers as designers of learning environment to support student engagement in the Philippine setting.

## **Framework**

This study assumed that student engagement is a function of teacher effectiveness and of teacher engagement (Chen et al, 2008; Klem and Cornell, 2004). It is logical to believe that teachers who are effective will more likely display behaviors facilitative of students' engagement. A teacher who is, therefore, engaged and effective has a greater chance of effectively influencing students' academic achievement. Such postulation has been held by (Valenta, 2010) about teacher engagement, teacher effectiveness and student achievement. It is, thus, argued that teachers who are engaged and effective are also actively involved in establishing healthy student relations; demonstrate enthusiasm in improving pedagogy and responsive to the global demands for quality teaching; and make or participate in teaching-learning decisions that enrich the lives of students.

**Student Engagement.** Central to student quality is student engagement. Student engagement is seen as the students' extent of meaningful participation in purposeful educational activities both in and outside the classroom which leads, contributes, and links to high quality and measurable learning outcomes (Krause and Coates, 2008; Kuh et al, 2007; Trowler 2010). Fredericks, Blumenfeld and Paris (2004) espoused the three dimensions of student engagement: behavioral, emotional and cognitive or intellectual. Behavioral engagement are students' observable actions of participation in class activities ; emotional engagement refers to feelings of belonging, safety and attachment to teachers, classmates or the institution that propel willingness to work; and cognitive or intellectual engagement refers to investment in dealing with more complex ideas and mastery of skills. This study assessed the students' level of behavioral, emotional and intellectual engagements.

On the other hand, Kuh et al. (2008) coined student engagement as representing both time and energy students invest in educationally purposeful activities and the effort institutions devote to using effective educational practices. This is where teacher factor plays vital role in

students' significant academic outcomes as a result of student engagement. Kuh developed the first framework for student engagement used during the National Survey of Student Engagement (NSSE, developed in 1998). This was based on five benchmarks: 1) level of academic challenge; 2) enriching educational experiences; 3) active and collaborative learning; 4) supportive campus environment; and 5) student–faculty interaction (cited by Bryson and Hardy, 2010). These five benchmarks are supportive of Fredericks et al.'s model of student engagement since the framework encompasses the behavioral, emotional and intellectual aspects of the students' academic life.

Although student engagement is succinctly linked to good outcomes, Bryson et al. stressed that it is more difficult 'why' and 'how' this process occurs: 'it is not clear to what extent student engagement and other measures of effective educational practice contribute to achievement and persistence over and above student's ability' (Kuh et al., 2008). Nevertheless, in US and Australia, engaging students is widely perceived as proxy for high-quality teaching (Bryson et al., 2010). In other words, teacher behavior is central to engaging students.

How do teachers influence student engagement? Some studies espoused teacher behavior as a factor to student engagement. Umbach and Wawryznski in Zepke et al. (2010) concluded that "educational environment created by teachers' behaviors has a dramatic effect on student engagement." On the other hand, other behaviors cited are: coming to class well prepared, displaying mastery and confidence in the delivery of content and in communicating well structured, high and fair expectations, are engaging in teaching-learning dialogue with students and setting availability for consultation (Klem and Cornell, 2004; Mearns, Myers and Bharadwaj and Umbach and Wawryznski as cited by Russell and Slater, 2011). Other studies also pointed out that teacher attributes increase student engagement (Russell and Slater, 2011; Zepke et al, 2010). Some of these attributes include: being friendly, interesting, approachable, those that have positive beliefs and attitudes toward learning (Russell and Slater, 2011) and those that know how to form quality, deep relationships with students with the intention of fostering supportive and caring environments (Groves et al., 2015; Pascarella and Terenzini et al., 1991, 2005; Taylor and Parsons, 2011). The discussion on teacher behaviors and teacher attributes contributing to student engagement emphasizes the paramount importance of teacher effectiveness.

**Teacher Effectiveness.** Teacher effectiveness is a critical area of inquiry that has emerged through the years among educational researchers (Stronge, 2008). In this study, teacher effectiveness is linked with student engagement. The higher the teacher's effectiveness, the greater is the tendency for the learner to be actively engaged which will eventually lead to students' academic gains. Teacher effectiveness predominantly influences student academic growth (Stronge, 2009). Teachers are the most significant factor that affects student achievement (Darling-Hammond & Snyder, 2000; Long & Hoy, 2006; Sanders & Rivers, 1996 as quoted by Ortiz, 2015). Teacher effectiveness stems from the teacher behaviors that impact the teaching-learning process as assessed. Such effectiveness can be concretized through students' feedback on teacher's performance and the teacher's effect on students. Accordingly, teachers are effective if they are able to cultivate students' thinking skills, stimulate their interest in the subject, motivate them to initiate their own learning, present learning materials well, challenge students intellectually, set high standards and have good elocutionary skills including their interpersonal skills (Weimer, 2013). In this study, teacher effectiveness was measured based on students' assessment of their learning outcomes as a result of their teacher's performance in the classroom. With 2000 sampled students, a study established the significant effect of teacher performance on teacher effectiveness (Polanco, Ortiz and Cinches, 2013).

Darling-Hammond (2009) opined that standard-based evaluations of teaching are significantly related to student achievement. Such evaluations aid teachers enhance their practice and effectiveness. This investigation adopted the framework developed by Liceo de Cagayan University to assess teacher performance vis-à-vis teacher effectiveness. This current study, therefore, looked into the basis of standards of teacher's performance as basis of measuring teacher effectiveness. The standards which cascaded from Philosophy and Principles of Faculty Evaluation were formulated within the context of the University's core values and sound teaching practices based on research and literature. These are instructional delivery, student engagement, learning environment, professionalism, and assessment skills.

Teacher effectiveness is manifested in instructional delivery where teacher's pedagogy promotes student's active participation (McEwan, 2002; Zwart, 2009; Darling-Hammond, 2010). Studies have shown that teachers' manner of communication allows students to think critically and to assimilate the lessons and or learning experiences facilitated by the teacher.

Moreover, effective teachers need to be adept at organizing and maintaining an appropriate learning environment. Crucial to the learning environment is the teachers' capability to establish good discipline, efficient routines, smooth transitions, and ownership of the environment as components of establishing a supportive and collaborative climate (Shellard & Protheroe, 2000). The teachers' ability to create a conducive and homey atmosphere in the classroom coupled with their effective time management and gentle approach with the students is a key component of teacher effectiveness which has bearing on student engagement.

It is likewise essential to look into teachers' assessment skill. Since teachers are primarily responsible for evaluating instruction and student learning, there is a widespread concern about the quality of classroom assessment. Assessments should relate to instructional plans. The teacher's conduct of regular assessment and prompt feedback of the results of evaluation assist students in determining their strengths and weaknesses as well as help them better prepare in their lessons. Extensive studies around the globe show that in consistently applying the principles of assessment of student learning, impressive gains in student achievement especially for struggling learners can be attained according to Black & William (1998) in Stiggins (2007).

The primary task of the teacher is to design engaging tasks and activities for students to succeed in the completion of these tasks. Student engagement is generally considered one of the predictors of learning. Carini, Kuh & Klein (2006) postulated that the more students study or practice in a subject, the more they tend to learn. In this context, teacher's way of questioning, her facilitation of learning tasks, her teaching style as well as her positive learning expectations, and open mindedness contribute to students' active engagement in class. Interests in lesson resulting in meaningful task behavior occur when lessons are clearly discussed and constructively supportive to real life experiences.

Moreover, teacher's professionalism characterized by teacher's positive behavior and values and her good interpersonal skills is another component of teacher effectiveness which may impact student engagement. Orosa (2008) identified teacher's dispositional and personality-related traits covering caring and concern for others' welfare, ethical conduct and integrity as themes of good teaching. Frymier & Houser (2000) also acknowledged the existence of interpersonal variables that are positively related to learning and asserted that student-teacher relationship is essential to effective learning outcome. It is crucial, therefore, that teachers create a positive interpersonal relationship with students in order to improve

student academic achievement. In summary, the above cited activities encourage students to engage and actively participate in the learning process.

Another important concept to consider in understanding student engagement is teacher engagement. It is advanced that student engagement is influenced by teacher engagement. The dissertation of Caldwell (2011) found out that high levels of teacher engagement had a positive effect on student engagement levels.

**Teacher Engagement.** As earlier hypothesized, student engagement is influenced by faculty engagement and teacher effectiveness. Kahn (1990) espoused three psychological conditions linked with engagement namely: meaningfulness or the extent to which people feel that what they are doing is worthwhile and valuable; safety, or the extent to which people feel comfortable being who they are at work; and availability, or the extent to which physical and psychological resources are accessible while engaging in work (May, Gilson, and & Harter, 2004 as cited by Ortiz, 2015).

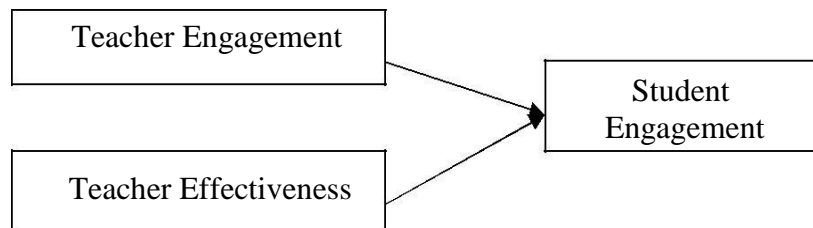
In educational institutions, teachers build social relationships with colleagues during work, but the emphasis on social relationships with students characterizes the heart of the work of teaching. In fact, the opportunity to work closely with students is a strong motive for many teachers entering the profession (e.g., Watt & Richardson, 2007). Measuring teachers' work engagement without capturing social engagement with students ignores one of the most important aspects of teacher engagement (Klassen, Yerdelen, and Durksen, 2013).

An engaged teacher is available to provide student support to accomplish the assigned tasks; adjusts ones teaching to accommodate students' pace; sets aside time to know students' needs and concerns (Kahn, 1990 as cited by Gilson and Hater, 2004). Similarly, Tinto (1993, 2000) documented the strong association of both formal and informal faculty–student contact to enhance student learning. This link was highlighted by Ewell (1997). Umbach & Wawrzynski (2005) also argued that the educational context created by faculty behaviors and attitudes has a profound effect on student learning and engagement.

Teacher-student relationships promote student engagement and positive student outcomes (Davis, 2003; Klassen, Perry, & Frenzel, 2012; Pianta et al., 2012; Wang, 2009). This engagement is beneficial to teachers too, as Jennings & Greenberg (2009) found that teachers who devote energy to forming warm and nurturing relationships with their students tend to experience higher levels of well-being, and less emotional stress and burnout.

While the authors argue that student engagement is an outcome of teacher effectiveness and teacher engagement, it is noteworthy to consider that teacher effectiveness and teacher engagement have their own antecedents. Although it is beyond the scope of this study, these authors believe that institutional structures and organizational milieu are critical to establishing both.

In a nutshell, student engagement is one of the outcome variables of teacher effectiveness and teacher engagement (Chen et al, 2008; Klem and Cornell, 2004; Umbach & Wawrzynski in Zepke et al. 2010). Teacher effectiveness influences student engagement (Stronge, 2009; Darling-Hammond, 2009; McEwan, 2002; Zwart, 2009; Darling-Hammond, 2010). Moreover, teacher engagement promotes student engagement (Davis, 2003; Klassen, Perry, and Frenzel, 2012; Pianta et al.2012; Wary, 2009 and Valenta 2010). Figure 1 illustrates the interplay of variables in the study.



**Figure 1:** Schematic Presentation of the Study

## Objective of the Study

This study attempted to strengthen the common supposition that a favorable outcome of teacher effectiveness and teacher engagement is student engagement.

## Methods

The study used descriptive correlational survey which was complemented with qualitative data emanating from focus group discussions. Three (3) adapted 4-point scaled survey instruments generated the quantitative data for the study. These were: Teacher Effectiveness Inventory and Teacher Engagement adapted from Ortiz (2015) dissertation entitled “Personal and Organizational Antecedents of Teacher Effectiveness in Two Autonomous Higher Education Institutions in Mindanao and Fredericks, Blumenfeld & Paris (2004) on Student Engagement. The instruments were tested for reliability using Cronbach’s

Alpha (R). Cronbach's alpha determines the internal consistency of items in a survey instrument to gauge its reliability. George and Mallery (2010) said that for scales to be reliable, values from 0.7 to 0.9 is considered acceptable. An R value of 0.9 or greater excellently indicates that the items representing the variable of the study are highly correlated to each other and therefore internally consistent (George et al., 2010). Normality values were established considering that there were only 98 teachers putting the set of data in question as to their normal distribution. Thus, normality values of skewness and kurtosis were computed. Values for kurtosis (K) between -2 and +2 are considered acceptable in order to prove normal univariate distribution. Meanwhile, for symmetry, if skewness (S) is between -0.5 and 0.5, the distribution is approximately symmetric. Normality assumption is necessary for multiple linear regressions and higher statistical test given that the set of data is less than 200 to support the calculation of the p values for significance testing.

**Table 1:** Respondents Distribution

HEI	Teachers	Students
A	18	271
B	30	527
C	50	1440
<b>Total</b>	<b>98</b>	<b>2238</b>

Table 1 shows a total of 98 college teachers and 2,238 students across the three higher education institutions (HEIs) that participated in the study. These were the full time college teachers representing the core faculty of the colleges of business, teacher education and arts,

who had assignments during summer classes from April to May 2016. Descriptive statistics, correlation and multiple linear regressions were used to organize the data as well as to address the objective of the study.

## Results and Discussions

Table 2 gives the basic descriptive data, to demonstrate scale reliabilities, normality measures (skewness and kurtosis), means and standard deviations. The different parts of the scale indicating the various constructs had the following Cronbach's Alpha Coefficient (R), namely: student engagement is 0.98; teacher effectiveness is 0.99; and teacher engagement is 0.90. The R values of the scale indicate a very high internal consistency considering that the acceptable range is from 0.7 to 0.9 (George et al., 2003). This also means that the indicators used in the constructs are highly reliable. Thus, it can be inferred that the indicators consistently measured variables of the study.

**Table 2:** Scale Reliabilities, Normality Measures, Means, Standard Deviation, and Zero-Order

Variable	Cronbach's Alpha (R)	S	K	Mean	SD
1. Student Engagement	0.98	-0.35	0.02	3.16	0.30
2. Teacher Effectiveness	0.99	-0.12	-0.14	3.19	0.35
3. Teacher Engagement	0.90	0.47	0.27	3.62	0.20

Legend: Scalar Interpretation (Connelly, L.M. and Powers, J.L.,2004); Padua (2014)

Range	Student Engagement	Teacher Effectiveness	Teacher Engagement
3.51-4.00	High Extent	Very Effective	High Extent
2.51-3.50	Moderate Extent	Effective	Moderate Extent
1.51-2.50	Low Extent	Slightly Effective	Low Extent
1.00 -1.50	Very Low Extent	Not Effective	Very Low Extent

The range of scale response is 1 to 4 where 4 is the highest indicating highly effective for teacher effectiveness and highly engaged for teacher engagement and 4 in student engagement means high extent. The following values indicate the overall result of each construct: Student Engagement (S=-0.35, K=0.02, M=3.16, SD=0.30, moderate extent); Teacher Effectiveness (S=0.-0.12, K=-0.14, M=3.19, SD=0.35, Effective) and Teacher Engagement (S= 0.90, K=0.47, M=3.62, SD=0.20, Highly Extent). The variables are normally distributed as shown by their skewness (S) and kurtosis (K) values where the limit of S is from -0.5 to 0.5 and K is from -2 to 2. These values assure that the confidence level or the significance level (p-value) in the multiple linear regressions is valid even with a sample of 98 teachers. The students, in general, were only moderately engaged behaviorally, emotionally and intellectually, while teachers were found to be effective and highly engaged. The values of standard deviations in the three constructs indicated homogeneity in the responses. This means that the responses of each respondent are spread very near to the mean. Table 3 further shows the relationships between and among the variables of the study.

**Table 3:** Pearson R Values on the Relationship between Student Engagement and Teacher Variables

Teacher Variables	Student Engagement (mean, sd, r-value)		
	Behavioral (mean=3.03,0.21)	Emotional (mean=3.14,0.23)	Intellectual (mean=3.28,0.22)
<b>Teacher Effectiveness</b>	<b>r</b>	<b>r</b>	<b>r</b>
Professionalism (mean=3.28,0.38)	0.70**	0.830**	0.826**
Instructional Delivery (mean=3.18,0.36)	0.751**	0.858**	0.841**
Student Engagement (mean=3.19,0.37)	0.698**	0.831**	0.815**
Learning Environment (mean=3.21,0.36)	0.663**	0.812**	0.802**
Assessment (mean=3.17,0.34)	0.660**	0.764**	0.759**
<b>Teacher Engagement</b>			
Student-teacher relation (mean=3.69,0.31)	0.001	0.23*	0.30*
Improving pedagogy (mean=3.57,0.40)	0.09	0.07	-0.08
Participating in teaching-learning Decisions (mean=3.21,0.39)	0.056	-0.130	0.085

\*\* Correlation is significant at the 0.01 level (2-tailed) \*Correlation is significant at the 0.05 level (2tailed)

The data revealed that student engagement was found to be significantly related to every factor of teacher effectiveness but not to all teacher engagement variables. Specifically, student engagement (behavioral, emotional and intellectual) can be significantly associated with teacher effectiveness variables such as professionalism, instructional delivery, student engagement, learning environment and assessment. On the other hand, only student-teacher relation was found to be significantly linked with the emotional and intellectual engagement in the study. Among the significant findings of the study is that the standards set for the teaching effectiveness (professionalism, instructional delivery, student engagement, learning environment and assessment) had been validated in construct through the findings of the study. The indicators of the different standards in terms of student outcomes were found to be highly significantly related to student engagement construct.

Table 4 on the other hand, presents the multiple linear regression analysis showing the influence of the teacher variables on student engagement.

**Table 4:** Multiple Linear Regression Analysis of the Influence of Teacher Variables

<i>Teacher Variables</i>	<i>Beta</i>	<i>T-Value</i>	<i>Sig.</i>
Teacher Effectiveness	0.501	15.61	0.000
Teacher Engagement	0.034	-0.888	0.377
<i>Dependent Variable</i>	<i>Student Engagement</i>		
Constant	1.61		
Adjusted R <sup>2</sup>	0.76		
F-Value	124.51		
Significance	0.000		

$$\text{Student engagement} = 1.61 + 0.501 \text{ teacher effectiveness} + 0.034 \text{ teacher engagement}$$

The regression equation above represents the best equation model considering that the F-value of 124. 51 is highly significant at 0.00. This further shows that 50.1% of the changes in student engagement is most likely influenced by teacher effectiveness and 3.4% of the increase in student engagement is explained by teacher engagement.

The data also revealed that teacher effectiveness is the best single predictor of student engagement with teacher engagement too far behind. However, this further means that taking

teacher effectiveness and teacher engagement as one, the model explains 76% of the variation in student engagement. What could account for the remaining 24% can be speculated as coming from other variables which are not part of this study.

While it was identified earlier that teacher effectiveness has significantly influenced student engagement, college student-respondents however, assessed their student engagement as only moderate extent in the three areas: (behavioral,  $M=3.03$ ,  $SD=0.21$ ); (emotional,  $M=3.14$ ,  $SD=0.23$ ); and intellectual ( $M=3.28$ ,  $SD=0.22$ ). Students on the other hand, rated their teachers' effectiveness as generally effective only and not highly effective. In the Focus Group Discussions ( $n=45$ ) conducted in the three HEIs, the following were the responses on the questions, "what encourages you to participate in class?" "...finish your projects?"

- *"when my teacher makes the lesson easier for us to understand"; "...is approachable" "competent"; "knows how to recognize student achievement"; and "open-minded".*
- *"teacher's passion for the lesson is felt"; "topic is interestingly discussed"; "use appropriate teaching strategies"; "versatile and highly knowledgeable of the topic" "brings positive energy into the classroom"; "explains lesson well"; "shows professionalism"; "good attitude to students"; "encourages student interaction and participation";*

From the answers, a common thread on the positive teacher-factor was very prominent confirming the idea that teacher behavior impacts student engagement and that the "educational environment created by teachers' behaviors has a dramatic effect on student engagement" (Umbach and Wawrynski in Zepke et al., 2010). On one hand, the students also cited behaviors such as competence, explains lesson well, good attitude to students, professionalism and allowing for student interaction.

The foregoing traits emphasized by the students during the focus group discussions were also cited by Russell and Slater (2011). The authors emphasized the following behaviors such as 'coming to class well prepared', 'displaying mastery and confidence in the delivery of content and in communicating well structured', 'high and fair expectations', 'engaging in teaching-learning dialogue with students and setting availability for consultation' encourage student motivation. One of the students who was interviewed unknowingly said it all when he succinctly declared "students' attitudes towards the class or projects, etc. are largely based on teachers' behavior and attitudes towards students." With this claim, the authors of the present study believe that when teachers prepare for their classes well and show them encouraging behaviors such as those that were mentioned above, students feel good and important, vis-à-vis motivated.

What are the implications of this study? Theoretically, it confirms the various theories and concepts that grounded this study. Students engage because the teachers generate the encouraging learning environment not only in class but also outside the classroom and those positive attitudes and traits motivate students to engage fully and to be actively involved in their academic life (Umbach and Wawrynski in Zepke et al., 2010; Klem and Cornell, 2004; Russell and Slater, 2011; Groves et al., 2015; Pascarella and Terenzini et al., 1991, 2005; Taylor and Parsons, 2011).

Some practical implications can also be drawn from the study beyond theoretical inferences. For one, students were only moderately engaged and teacher effectiveness was gauged by the students as only effective. On the other hand, teacher engagement was not significantly sensed or experienced by the students to have impacted their student engagement. The argument that any effort done by the teacher to professionally equip them should cascade

to the students was not confirmed in this study. While teachers saw themselves as highly engaged as a teacher, this was not significantly felt by the students. Institutions need to look into teacher engagement activities and determine the extent of relevance of these practices or activities in relation to students' academic learning outcomes. This further implies that for students to highly engage, institutions need to come together with the teachers, administrators, and staff primarily to "organize more meaningful learning opportunities" beyond what are presently practiced and expected. Furthermore, more purposeful activities and services have to be designed for students to fully engage in their college life and achieve academic outcomes (Chen et al., 2008; Kuh et al. 2008).

## Conclusion

Higher education institutions see student engagement as part of their retention strategies as scholars agree that campus life plays an important role in influencing students to stay. This is viewed on the context of improving their graduation rates and minimizing possible revenue loss. Conscious effort to hold and /or retain students requires a steady focus on many aspects of the institution citing Pascarella and Terenzini (2005), who continue to promote that student meaningful engagement depends on institutions, the teachers and staff that generate the conditions which stimulate and encourage student involvement .

Institutions should consider consistently espousing the philosophy that student quality is largely based on teacher quality and student quality is characterized by the degree of student engagement. Since such engagement can be predicted by teacher variables, it is paramount for the institutions to revisit and review their faculty development program and explore other innovative strategies of supervision other than what are being currently practiced especially in areas that target further development and/ or refinement of teachers' competence. Teachers' capabilities to engage students positively need to be developed consistently and become part of their performance requirements considering the outcomes based education.

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# **Re-Creating the Lived Experiences of Student Leaders in Strengthening a Muslim-Christian Village in Northern Mindanao, Philippines**

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## **Abstract**

Community service is one of the most important pillars of higher education. College students are involved in community-building as an integral part of their holistic formation from the onset of their college years until graduation. A phenomenological study was conducted to explore the richness of this experience. This research aimed to answer the overarching question: What is community service as a lived experience by the student leaders who actively engaged in strengthening a community of Muslims and Christians in Northern Mindanao? In-depth interviews, informal dialogues, and essays were employed to gather data from the seven student leaders who were purposefully chosen through criterion sampling. A transcendental phenomenological approach served as the groundwork on investigating the essence of community service. A modified method used by Creswell (2007) was employed to analyze, group, and derive themes from the phenomenological data. Community service enabled the participants to build teamwork, understand the culture of the community, share their knowledge, and to plan with the community. Community service also became an opportunity for them to experience joy in making difference to the life of others, empathy, personal transformation, and to test their patience and perseverance. For the student leaders, the sense of social responsibility and personal efficacy was the essence of community service.

**Keywords:** Community Service, Lived Experiences, Student Leaders, Social Engagement, Phenomenology

## **Introduction**

Community service is one of the most important pillars of higher education. It brings the academic community closer to the social realities and provides more opportunities for social engagement and growth especially among college students.

Scholars highlight the positive effects of community service to the individual's self-esteem, skills and capacities, understanding of social issues, personal insights, and cognitive development (Wu, 2011; Yorio & Ye, 2012). Moreover, self-transformation and sympathy surfaced from the narratives of the college students who did a service trip to Nicaragua (Cox & McAdams, 2012). Exposure to the realities in the community also improves students' mastery of the course content in terms of a noticeable jump in knowledge acquisition (Wickersham, Westerberg, Jones, & Cress, 2016).

These studies provide insights on the impacts of community service to learning and to the learner themselves. However, it failed to bring to light the experience of community

service as lived by individuals or the individual's "being-in-the-world-with-others" (Dy, 2003, p. 45). In addition, literatures of Asian context or of Filipino experience are still very limited.

An encounter with the people in the community captured the interest of the author to study about community service. These people narrated how the student leaders had helped them improve their livelihood, reduce malnutrition, and increase their knowledge about healthcare. The author asked himself of how it felt to be of service to the community. More importantly, the author wanted to understand how it felt to be a student leader giving services to the people of different of interests, education level, and social backgrounds. Hence, a phenomenological study was conducted. This study was guided by the overarching question: What is community service as a lived experience by student leaders in strengthening a Muslim-Christian village in Northern Mindanao?

## **Framework**

This study was anchored on the epistemological position that the student leaders involved in community service were the credible sources of data. Engaging them through the process of dialogue was an important means of data collection. These dialogues contained significant reflections that described the participants' experiential learning. It means that the students learned from what they are doing in the community. This process of learning from doing community-related activities is also called service learning. However, not all of the services rendered to the community can be referred to as service learning. In this study, service learning was viewed in the context of Bringle and Hatcher (1996): a credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility (p. 222).

With this perspective, three main points were emphasized: the credit-bearing educational experience, the participation in an organized service activity to meet the needs of the community, and the reflection regarding one's experience of the activity. The first point is that community service must be credit-bearing before it can be considered as service learning. Thus, it could be part of the requirements of a particular course which students are required to engage in social activities. The second point is the participation in an organized service activity to meet the needs of the community. This shows the importance of students' participation in not just any kind of activities but an organized activity specially designed to address the needs of the residents. Lastly, reflection should be considered. Reflection is an indispensable element because it enables the individual to look into the whole structure of the experience. In a nutshell, these points laid the foundation of the search for the meaning in the lived experiences of research participants.

## **Objective of the Study**

This study aimed to explore the lived experiences of student leaders in strengthening a Muslim-Christian village. Specifically, it aimed to: 1) determine what the student leaders experience about community service; 2) discuss how the student leaders experience community service; and 3) describe the essence of community service.

## Personal Bracketing

The author is one of the faculty members of the Arts and Sciences Program of Lourdes College. Before he joined the work in the academe, he was a Policy Advocacy Officer of a non-government organization that partnered with the subsistent farmers in the Philippines. Aside from that, he was immersed with urban-poor problems when he was still studying for priesthood. This experience with the marginalized sector influenced his participation in the extension program of the academe. He speaks Bisaya, the lingua franca of the people in the village and of the students. As a representative of the Arts and Sciences Program, he was one of the members of the team who worked for the formation of the community leaders in Sitio Singapore. He was invited as facilitator of the workshop for the formation of the core group of community leaders. The author has no direct contact with the research participants during the time that they were in the community. Hence, the author has no previous information about research participants' experience.

## Methods

**Study Design.** Phenomenology was employed in this study. Phenomenology is a philosophic discipline spearheaded by the German Mathematician-Philosopher Edmund Husserl. It attempts to arrive at a certain truth to describe the phenomena as it manifests to the consciousness of the one who experiences the phenomena (Moran, 2000). In addition, it describes the meaning of how the individual experiences the phenomenon (Creswell, 2007). Specifically, the transcendental phenomenology (Moustakas, 1994, as cited in Creswell, 2007) was used in this study. Transcendental phenomenology offers more room for the description of the experience of the participants rather than on the researcher's interpretation (Creswell, 2007).

**Sampling Procedure.** Criterion sampling was employed to select the participants of the study. It is used for cases of individuals with the use of certain criterion (Palys, 2008). The participants of the study were purposefully chosen through the following criteria: 1) They were students of Lourdes College; 2) They had experienced community service in Sitio Singapore as part of their requirements on a particular course or of the Program; and 3) They were student leaders. In selecting the seven participants of the study, each Program Dean or Coordinator was invited to recommend student leaders from their respective program. Seven student leaders were chosen: three B.S. in Nutrition and Dietetics, two B.S. in Pharmacy, and two B.S. in Business Administration students.

**Data Collection.** Multiple interviews using an in-depth semi-structured face-to-face interview were conducted following an interviewing protocol (Creswell, 2007). These interviews, conducted on May 25, 2016 and June 8, 2016, were recorded in a digital audio recorder with the permission of the participants. Each interview lasted from 20 to 40 minutes. The interview was in Cebuano, the language of the participants. The recorded interviews were transcribed and translated into English. Participants were also asked to answer a questionnaire on demographic profile and to write an essay of their experience of community service.

**Data Analysis.** The phenomenological analysis was done using Creswell's (2007) simplified version of the Stevick-Colaizzi-Keen method. Step one required the researcher to

write a personal account of experiences of community service as a form of an epoche or bracketing in order to focus only on the participants' experience. Epoche is a term used by Husserl to mean suspension of the researcher's natural attitude which consists of his prejudices and biases (Dy, 2003). The second step involved listing of significant statements from the transcripts and the essays. Creswell called this "horizontalization of the data" (Creswell, 2007, p. 159). A list of non-repetitive and non-overlapping statement was developed. Step three was the grouping of the significant statements into different themes or "meaning units" (Creswell, 2007, p. 159). In the step four, the researcher described "what" the student leaders experience or the "textural description" (Creswell, 2007, p. 159). The researcher, in step five, wrote the description about "how" the experience happened or the "structural description" (Creswell, 2007, p. 159). Reflections on the context and setting were also taken into consideration. The final step involved the process of incorporating both textural and structural descriptions. The researcher wrote a merged description of the phenomenon or the "essence" (Creswell, 2007, p. 159) of the experience of student leaders. The essence is something that cannot be changed "without making the object cease to be the thing..." (Dy, 2003, p. 45). In this final step, the researcher looked for the essence by asking himself about what is that something that the researcher cannot change, or if it is missing, then social engagements cannot be called a community service.

## **Results and Discussions**

Seven student leaders involved in strengthening an urban-poor village named Sitio Singapore were considered as participants of the study. To put their social engagements into context, it would be fitting to introduce them first before describing their experience. In this report, they were given different names: Carlo, Lerma, Arlene, Rose, Gina, Sonia, and Janet.

The first participant was Carlo, a 17-year old scholar and student leader. He studied at Lourdes College through a scholarship grant from the local government. His father was a carpenter and his mother was a plain housewife. He considered himself as an active and consistent student leader. Carlo was a Representative, Discipline and Sanitation Officer, and Public Information Officer of the Business, Accountancy, and Information Technology (BUSAC-IT) Program student organization. He was just first year when he started to have social involvement. However, he was in his third year when he introduced the livelihood project, the bigasan or rice selling business, to the parents of Sitio Singapore.

The second participant was Lerma, a 19-year scholar who took up Bachelor of Science in Pharmacy. She graduated as valedictorian in high school. Her father had no work, but, her mother worked as an employee of a private institution. For three consecutive years, Lerma was an officer of the Lourdes College Student Government (LCSG). She was also the president of the Pharmacy Program student organization. She was already involved in community service since first year. She was third year when she started to get involved with the activities in Sitio Singapore.

The third participant was Arlene, a 20 year old Bachelor of Science in Pharmacy student. Her father was a musician and her mother was a government employee. She was a

student leader during her second and third years in college. She was the Treasurer of the Pharmacy program and the Young Hygeians Club. Her interest to serve Sitio Singapore was propelled when she saw the situation of the children in the village. Together with other Program officers, Arlene considered giving healthcare to the children as their primary goal.

The fourth participant was Rose, a 19 year old Bachelor of Science in Business Administration student. Her father was a policeman and her mother was a businesswoman in the city. Rose graduated with honors in high school. She was an officer of the Red Cross Youth-LC Chapter, a Representative and Documentary Secretary of the BUSAC-IT Program, and a Secretary of Audit of the LCSG. She was in her third year when she engaged herself in helping the people of Sitio Singapore.

The fifth participant was Gina, a 24-year old Bachelor of Science in Nutrition and Dietetics student. She was a scholar of the Commission on Higher Education (CHED), a government agency. Gina's father was an employee of a multinational company and her mother was a plain housewife. She didn't hold any position in the student organization. However, she was an active leader of the Community Program Planning Committee of the fourth year BSND students. She had a very rich experience in community service in Sitio Singapore. It was during her fourth year that she was thoroughly involved in the feeding program for the underweight and malnourished children.

The sixth participant was Sonia, a 20-year old Bachelor of Science in Nutrition and Dietetics student. She had two siblings. Gina's mother was a government employee and her father was a civil engineer. She was the Secretary and Treasurer of the Junior Nutritionist and Dietitian Association of the Philippines (Jr.NDAP). She joined the community service at Sitio Singapore as part of the requirements of the Program. However, her perspective changed as she became immersed with the situation in the community especially with the children.

The last participant was Janet, a 23-year old B.S. in Nutrition and Dietetics student. Her father was a driver and her mother was a public school teacher. Janet was the president of the Junior NDAP and the student organization of the Allied Health Program. She considered her service in the village as part of the requirement to earn a degree. However, it was changed when she was immersed with the situation in the community. She was already in the community before their OJT.

### **The Student Leaders' Experience of Community Service**

The first research question probed into the student leaders' participation and contribution in the community life of the people. Before they conducted their activities or projects in the community, the student leaders carried with them their personal backgrounds and various perspectives in life and in helping others. Their experiences in the community were contributing factors that changed their perspectives. Five themes were surfaced from the transcripts such as: building teamwork, understanding the culture of the community, sharing of knowledge, and planning with the community.

**Building Teamwork.** The research participants believed that each student should support each other for the success of the implementation of the project in the community. For example, Gina spearheaded the meeting with the parents although she felt uncomfortable because they were older than her: “I acted as the facilitator in the activities that we had in the sitio.” Similarly, even though Janet expressed apprehension to work with the people because of her strict look, but, as means of supporting her group, she took an initiative to make the people feel comfortable with her. She voluntarily cooked the food for the children during the feeding program. She said that it was really difficult because she needed to use firewood instead of a gas stove. She stated: “I volunteered to cook for the feeding program. It was a struggle... I am not used to the firewood in cooking.”

On the other hand, Carlo manifested his support by performing their assigned task or as a matter of common sense to help the group. Sonia stated: “I was assigned to collect the money and marketing and to entertain the children during the feeding. I also planted the seeds at the backyard of the house when I have nothing to do in the group.”

**Understanding the Culture of the Community.** The participants believed that community service should start first with the knowledge of the people in the community and their existing culture. Understanding the culture of the community means knowing their needs, attitudes, and behavior. For example, Arlene and Gina realized that the people in the community were a little bit shy and skeptical.

Arlene stated: “We visited them again and again until such time that the people there were cooperating with us...we found out that the people living in the community lacked healthcare and guidance.”

In similar manner, Janet realized this when she had the first encounter with the parents during the feeding. Janet stated: “I learned that the people there are so demanding that they really insisted that we should deliver the food to their respective houses instead of our agreement that they will just bring their children to our meeting place.”

**Sharing of Knowledge.** The research participants acknowledged that their presence in the village was an opportunity for them to share their knowledge. The participants agreed that they were able to teach the people about what they have learned from their major courses. For example, during one of the medical missions in the village, Lerma was really happy when she recalled the experience. She said: “We are given a chance to counsel them about the intake of medicine because the people tend to grab the opportunity like this...according to them the medicines are expensive in the pharmacy.”

Additionally, Carlo and Rose expressed that there was an actual sharing of knowledge to the beneficiaries of the rice selling business project. They added that it was easier for them to teach the beneficiaries because they were interested with the business. Carlo said that: “We taught them how to record their daily sales and also their gains... the steps on how run the business.”

Planning with the Community. All the research participants agreed that they had consulted the target beneficiaries before they implemented their projects. To Arlene, Gina, Lerma, and Sonia, planning together with the target beneficiaries made them learn what the really parents wanted. Lerma stated:

“The community was involved in the decision making, they were oriented well on what will happen to their place and what are we going to do.”

In the same way, Rose also shared similar experience. Rose said that: “We scheduled a meeting with the community and during the meeting we shared our ideas through brainstorming until we agreed about the project that the community would like to undertake ... the Bigasan [rice selling].”

### **The Meaning of Community Service**

The second research question probed into the student leaders’ understanding of the meaning of community service. The four themes, joy in making difference to the life of others, empathy, test to one’s patience and perseverance, and personal transformation, emerged from the participants’ accounts and were considered as the created meaning formed from what they have experienced in Sitio Singapore.

Joy in Making Difference to the Life of Others. The research participants said that they found joy in extending support to the people in the community. When they saw the progress of the target beneficiaries, the participants became delighted because of their contribution to the lives of these people.

Carlo said: Every time I am part of this community service, I am so grateful, honored, and happy that I contributed and helped them change their lives.

In the same manner, Gina and Rose felt the joy upon seeing the fruit of their labor in the village. Gina stated: “Out of 12 children, 5 gained weight for the span of 30 days, we exceeded our goal. I felt very happy because despite of difficulties that we faced, we still obtained a good result.”

Empathy. The research participants pointed out their feelings toward the community. They all agreed that they would like to help them because of the sad situation of most of the people there. Sitio Singapore is composed of more or less 150 families living in subsistence. Many of the families are just relying on a daily or weekly wages or a daily income from selling snack foods. Some children are malnourished because the family cannot afford to buy nutritious food. It addition, they cannot also provide for the needs of their children. For example, Rose was really struck by what she saw she first went to the community. Rose stated: The day that I saw the community, I really felt compassion to the children. They were running without slippers and without proper clothing.

Moreover, when Gina saw the situation in the sitio, she told herself that her heart really belonged to these people. She wanted to help them to the best that she could. She said: You

must be sure that you put yourself into the shoes of the people living in the community. I was encouraged to do community service there because I saw the community and I saw a very pitiful situation of many of the families there.

**Test to One's Patience and Perseverance.** The research participants believed that community service was a difficult task. It tested their patience and perseverance. Sitio Singapore is a community of Muslims and Christians. They formed an organization in the village which was composed of Muslim and Christian leaders to maintain peace in the village. Although the people were living harmoniously with each, they possessed different characteristics and culture. On the other hand, the student leaders have also their own background and personal history that made it difficult for them to understand the residents. Some of the student leaders came from a well-off family and some came from the middle class. Many of them did not experience poverty because they were well-provided by their parents. For instance, Sonia recalled her sad experience during one of the feeding programs. Sonia stated: There were times that I was frustrated because some of the parents were not participating. You need to stretch your patience... some of them were hardheaded.

Moreover, Lerma said that the people in the community were very difficult to manage. She experienced this during one of the medical missions when she was assigned in the patient counseling desk. Lerma stated: We need to be patient. I learned this during my encounter with them in the medical mission when I was counseling some of the parents who really insisted for additional medicines more than the doctor's prescription.

**Personal Transformation.** The research participants agreed that they grow as a person. They said that they became more responsible because of the unique experience. Furthermore, it made them realize the value of life and the importance of working hard in their studies for the future. Through community service, the participants said that they became more mature in spending the allowance that their parents gave to them. Gina stated: I described my experience as life-changing because it changed my perspective. It changed me as a person because the experience was really unique; you helped others. I can say that nothing can pay you for the experience of the people whose lives were changed because of you.

In a similar way, Carlo realized how his personal attitude was changed. He became appreciative of himself. Carlo said: Community service is really a big help... because it molded us to become a better person. I learned not to complain because other people do not have food. I learned to value self-worth because I helped others and I achieved something.

### **The Essence of the Community Service**

After the incorporation of both the textural and structural descriptions of community service, the researcher reviewed the themes and found out that two themes, personal efficacy and social responsibility emerged as unique to the experience of student leaders. The first theme, personal efficacy, will be discussed first. Then, it will be followed by the discussion of the second theme, social responsibility.

Personal efficacy encompasses the experiences of the student leaders about community service. As a group, they helped and supported each other with an utmost goal of serving the community. While they were in the community, they built a strong foundation of teamwork through faithfulness to their assigned task or using their common sense as a means of support to their group. Although at times, their patience was tested by the difficult situations of the community, but they never grew tired, they never surrendered. Rather, they persevered and became resilient and aggressive with their intention to strengthen the community through the various services that they offered in partnership with the residents. After all, community service offered them a sense of fulfillment and a feeling of happiness because they saw the fruit of their labor. They became part of the development of the people's livelihood, of raising their awareness about proper health practices, and of awakening their consciousness about health and nutrition. Community service also molded them to become a better person in the academe and in the society. It transformed their perspective about life. It taught them to become responsible and effective student leaders.

On the other hand, social responsibility allows student leaders to grow holistically. The formation that they have in the academe was being reinforced with their experience of the social realities in Sitio Singapore. With their social awareness, student leaders became more cognizant of their role in the transformation and development of the society. They became conscious that they are part and parcel of the bigger community. They also became sensible about the culture of the people and their social environment. To a larger extent, community service molded them to understand and to respect the culture of the community and to behave in such a way that they would not offend anybody. In addition, community service taught the student leaders a very important lesson that service should start from the people themselves. It means that community service should involve the community in planning for any services to be rendered to the community. In this way, ownership of the project can be established between the stakeholders, the community and the student leaders.

Taking into consideration these two themes that were surfaced, there is but one clear answer to the question: Would a social engagement be a community service without this something? A sense of personal efficacy and social responsibility makes a social engagement a community service. Would a social engagement be a community service without sense of personal efficacy and social responsibility? The answer was "no." A sense of personal efficacy and social responsibility gave the whole idea of community service to the student leaders. Without a sense of personal efficacy and social responsibility, community service was not a community service.

## **Conclusion**

By going through all the themes that emerged from the study as well as the reflections of the author, the following set of conclusions was formulated.

First, community service was an opportunity for the students to explore social realities. From the interviews, the student leaders were at first apprehensive to work in the community. However, when they saw the community, the situation opened their eyes to the possibilities of engaging with the people especially the mothers and the children. They became socially aware that there were still people in the society that did not experience the comfort that most of these students experienced. They became curious of the people's lives and their struggles in the community.

Second, community service created an indelible reflection about personal and social transformation. With their reflections from the transcripts, the student leaders expressed happiness upon seeing the success of their project in the community. Their happiness was not only limited to this aspect but it also extended to their realization of personal growth. The experience molded them to become better persons and better citizens. It enabled them to see themselves as real and effective student leaders and efficient students in the academe.

As an educator, these conclusions imply the necessity of community service in the curriculum of college students because of its positive effects as revealed from the experience of the individual student leaders. The formal integration of community service in the syllabus or in the coursework of college students will give opportunities for them to apply their learning to the real environment.

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# **Collaborative Learning, Gender Groupings and Mathematics Performance**

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## **Abstract**

The study was conducted to find how students perform in class if they work in groups. It also wanted to find out which gender groupings will students be working comfortably and obtaining better results. Experimental research design was utilized where the subjects were randomly assigned. The subjects of this study was composed of 9 groups, three all-male groups, three all-female groups, and three mixed groups. Using ANOVA, data revealed that the subjects' formative tests mean score had no significant difference which implies that subjects if working by himself/herself obtained more or less similar results due to they were randomly assigned. While the collaborative learning where the subjects worked in different gender groups showed that there was significant difference in their performance where all-female groups obtained the highest mean score followed by mixed groups implying that if subjects work with whom they are comfortable would have better results. In the Math achievement test which was taken individually posted that there is a significant difference in the mean scores obtained due to the level of improvement of their learning which could be attributed to whom they worked and learned the concepts with.

**Keywords:** Collaborative Learning, Gender Groupings, Math Performance

## **Introduction**

“The development of learning in small groups in higher education has occurred, in part, because of strong evidence indicating that students working in small groups outperform their counterparts in a number of key areas. These include knowledge development, thinking skills, social skills, and course satisfaction” (Davidson, N., & Major, C. H., 2014).

Zurita, Nussbaum and Salinas (2005) pointed out that how the participating groups are composed, is one of the most important decisions to be made in a collaborative learning activity. These compositions produce different learning and social interaction results. The ability to change the group member composition in real time and dynamically enables the leveling up of learning results and improvements in the participants' social relationships. Changes in composition also facilitate the analysis of the best criteria to be used in a determined activity.

Some forms of group learning have become more mainstream than others, and these provide useful direction for faculty to consider as they weigh the options. The way children learn can affect how well they learn. There are studies which indicate that boys and girls have different styles for learning, and student success can be linked to learning styles (Hein & Budny, 1999).

Hall (2008) stated that boys' and girls' brains develop differently. While girls develop verbal/linguistic skills early, boys' brains concentrate on spatial and kinesthetic intelligences. Boys need more movement than girls while they learn which often results in discipline difficulties in the classroom.

Roschelle & Teasley (1991) stated that "collaboration may be described as the mutual commitment of members of a small group to coordinate their efforts in order to solve a problem. Furthermore, in such an environment students can acquire new skills, ideas and knowledge by working together to build solutions to educative problems" (as mentioned by Zurita et al., 2005).

Mathews (1992) found that high-ability students prefer cooperative learning in homogeneous ability groups than heterogeneous ability groups. This means that students who are academically more inclined prefer to form a group with those who are as equal or more academically inclined rather than being grouped with a student of lower ability (as mentioned by Samsudin, 2006).

It has been shown that male and female students interact with group members differently and that in mixed gender groups males tend to dominate (Guzzetti and Williams, 1996). Therefore it is proposed that using single gender groups will enable female students to more actively participate. This study will explore the effect that arranging cooperative learning groups by gender has on the performance of students and their level of active engagement.

It is on this light why the researcher is motivated to pursue this study, to find out how the students will perform if they work in groups. Moreover wanting to find out at what kind of groupings they will be performing better.

## **Statement of the Problem**

The study would like to find the effects of Collaborative Learning and Gender Groupings in the Mathematics Performance of Bachelor of Elementary Education (BEED) Students. Specifically, this study sought to answer the following questions; (1) What is the performance of the students in the following; a) Formative test, b) Collaborative learning activities, c) Achievement test? (2) Is there is a significant difference in the performance of the students in the following; a) Formative test, b) Collaborative learning activities, c) Achievement test?

## **Hypothesis**

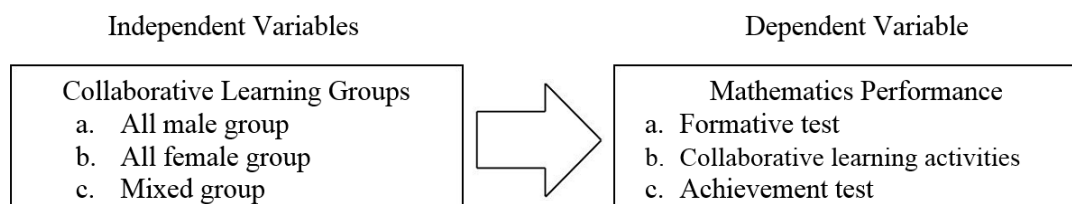
The study will be guided by the following null hypothesis: There is no significant difference in the students' formative test, collaborative learning activities and mathematics performance in the different gender groups.

## **Significance of the Study**

This study is not to decide if the collaborative learning and gender groupings is the best approach to teaching. Instead, the results of this research can be utilized by educators to determine areas for improvement in making learning process in a classroom setting be more successful.

To the students, findings of this study will be beneficial since they are the center of any classroom setting. They need to know when and how they can perform better in class. To the teachers, findings of this study will give them ideas to determine how they can make their teaching effective. To future researchers, findings of the study can be used to validate similar or related studies in the future.

## Conceptual Framework



**Figure 1:** The Conceptual Framework of the Study

## Scope and Limitation of the Study

This study was conducted in Eastern Samar State University College of Education during the second semester of School Year 2015 – 2016. The subjects of the study were third year Bachelor of Elementary Education (BEED) students who were enrolled in Math 321.

In interpreting the results of this study, there are several limitations to be considered. These limitations are related to the subjects, the length of the study, and the material used in the course. The subjects of the study were the third year BEED students with very small number of male students. The instruments used are prepared by the instructor. Another limitation of the study was the length of the experiment. A six – week implementation of study only was followed due to some class interruptions.

## Related Literature

In a study of students with strong preferences to learning alone or learning in groups, Wallace (1993) found that those preferring to learn alone “evidenced statistically higher mean lesson-test scores than those who were identified as preferring to learn with peers.” Wallace suggested the possibility that this result is due to a traditional structure in the classroom, and that the organizational pattern in the classroom had not matched a preference to working with peers. On the other hand, memory research indicates that children remember best by discussing what they have learned in groups, practicing and using what they have learned, and by teaching others (Madrado & Motz, 2005).

Culbertson (2010) emphasized that females contributed to small mixed gender groups just as they would within the larger mixed gender classroom and that there is a notable difference in the approach each gender takes to learning physics and interacting with others. Male students are more likely to make predictions quickly, avoid questions to which they do not know the answer, provide answers and look for concrete solutions. Female students, on the other hand, tend to raise questions about the content, do not present solutions right away, invite other members of the group to participate, and look to build consensus. It has also been shown that male and female students present their objections to a learning group in very different manners. Males tend to disagree more than females in a learning group. Males require the group

members to give evidence to any statement that is made that contradicts their reasoning for a particular phenomenon, whereas female students tend to use an indirect approach by raising questions and stating possibilities to raise their objections (Guzzetti et al., 1996). Furthermore it has been shown that male students tend to ignore the female students' ideas and interrupt females as they try to explain their ideas.

As mentioned by Kowaliw, that there are also studies that show that this method is nonconductive to learning. Peterson, Janicki, and Swing (1981) came to the conclusion that students who receive help from their peers may or may not improve their performance. Harrison and Covington (1981) found that low achieving students are hindered by the fact that they may be holding their group back in a task. When comparing homogeneous male and homogeneous female pairs in cooperative tasks, researchers have come to many different conclusions. Some research has found that male pairs are more effective than female pairs in cooperative learning tasks. Webb (1991) found that male pairs accomplish tasks in the shortest amount of time possible and are very competitive in their tasks. Other research states that female pairs are more efficient in cooperative learning. Cohen (1994) found that the females work is more deliberate and consistent to make sure that the task is completed and that the fewest amount of mistakes are made.

The conclusion of researchers such as Webb (1991) is that homogeneous pairs outperform heterogeneous pairs. Although boys competed and girls cooperated, both types of pairs still achieved their goal of getting the computer task done effectively. This was not the case with heterogeneous pairs because male traits of competition and female traits of cooperation kept both children from working together.

In the study of Sonya R. Porter Draper (2004) "The Effects of Gender Grouping and Learning Style on Student Curiosity in Modular Technology Education Laboratories ", the overall scores for girl/girl groupings were higher than girl/boy and boy/boy groupings, and scores for girl/boy groupings were higher than boy/boy groupings. A one-way analysis of variance was conducted to evaluate whether the gender grouping means differed significantly from each other. According to the analyses, the F-tests revealed no significant differences in gender groupings. Kowaliw in his study "Homogeneous and Heterogeneous Gender Pairs, Controlling Behavior, And Achievement on a Cooperative Learning Task" his hypothesis, that homogeneous male and female pairs would complete the task before heterogeneous pairs, was incorrect, males took the longest to complete the task and researchers also disagree as to which type of gender pair works most productively. Culbertson, Condes & Bradford (2010) in their study "The Effect of Single Gender Cooperative Learning Groups in High School Physics Classes " indicated that the gender gap is reduced when single gender groups are used, without detriment to male students, and that students, on average, prefer single gender cooperative groups.

## **Research Design**

This study utilized the experimental research design. It will find out effects of collaborative learning by gender groupings in the mathematics performance of the subjects of this study which was composed of 9 groups, three groups are all male members, another three are all female groups, and the last three were mixed groups with two male and two female members for a total of 18 male and 18 female students.

## Research Instrument

The study utilized teacher-made formative tests, collaborative learning activities and an achievement test. A dry-run was conducted and item analysis was done to validate the instrument. The final copy was subjected to face and content validation by a fellow math teacher.

## Procedure

An approval to conduct the study was secured from the Dean of the College. Then, series of discussion followed by collaborative learning activities by gender groupings, formative tests and an achievement test were administered at the end of the study. The mean was used to find the average of the formative tests, cooperative learning activity outputs and achievement test. ANOVA was used in comparing the performance of the three collaborative learning groups in their formative tests, cooperative learning activity outputs and achievement test.

## Results

**Table 1:** Formative Test Mean Scores of the Three Gender Groups

Groups	Mean	interpretation
All male Group	27.00	Average
All female group	27.67	Average
Mixed group	27.33	Average

Table 1 presents the mean scores of the three gender groups in their formative tests showing that the all-female group obtained the highest mean at 27.67 and all male group obtaining the lowest mean at 27.00, however all mean scores are interpreted as average. This implies that students when working alone, more or less obtains similar scores in their individual formative tests.

**Table 2:** Collaborative Activity Mean Scores of the Three Gender Groups

Groups	Mean	Interpretation
All male Group	34.17	Average
All female group	42.42	Above Average
Mixed group	38.67	Above Average

Table 2 shows the mean scores of the three gender groups in their collaborative activities. The all female group posted the highest mean at 42.42 (above average), mixed group obtained a mean of 38.67 interpreted as above average and the all male group garnering the lowest mean of 34.17 (average). The result implies that all female group are performing better than the all male group, while male students combined to work with female students are performing better as compared to if they are grouped with fellow male students.

**Table 3: Math Achievement Mean Scores of the Three Gender Groups**

Groups	Mean	Interpretation
All male Group	41.67	Above Average
All female group	45.17	Above Average
Mixed group	43.17	Above Average

Table 3 reveals the mean scores of the three gender groups in their math achievement test. The all female group obtained the highest mean of 45.17 as compared to the mixed group garnering an average score of 43.17 and the all male group at a mean of 41.67 all has an above average performance. Though the means vary, the differences are negligible, all groups performed better at the end of the experiment. Final result of the experiment implies that collaborative learning and gender groupings may have affected the performance of the students in their achievement test.

**Table 4: ANOVA of the Formative Test in the Three Gender Groups**

Source of Variation	Sum of Squares	Df	MSS	F	Tabular value	interpretation
Between Columns	169.55	2	84.77	21.55	3.29	Not significant
Within Columns	67.46	33	2.04			
Total	237.01	35				

Table 4 is the ANOVA table presenting the formative test results in the three gender groups with the computed F value of 21.55 greater than the tabular value of 3.29 revealing that there is no significant difference in their test results. The result is in consonance with the null hypothesis that there is no significant difference in the formative test in the three different gender groups. This result implies that if tests are taken individually the scores of the subjects will not differ significantly.

**Table 5: ANOVA of the Collaborative Activity in the Three Gender Groups**

Source of Variation	Sum of Squares	df	MSS	F	Tabular value	interpretation
Between Columns	2.67	2	1.33	0.35	3.29	Significant
Within Columns	125.33	33	3.8			
Total	128	35				

The ANOVA table presented in Table 5 shows the collaborative activity results in the three gender groups with the computed F value of 0.35 which is less than the tabular value of 3.29 revealing that there is a significant difference in the results. The result opposes the null hypothesis that there is no significant difference in the collaborative learning activities in the three different gender groups. It implies that students working in different gender groups had great effect in their collaborative learning outputs.

**Table 6: ANOVA of the Math Achievement in the Three Gender Groups**

Source of Variation	Sum of Squares	df	MSS	F	Tabular value	interpretation
Between Columns	18	2	9	0.32	3.29	Significant
Within Columns	910	33	27.58			
Total	928	35				

Table 6 is the ANOVA table presenting the math achievement test results in the three gender groups with the computed F value of 0.32 which is less than the tabular value of 3.29 revealing that there is a significant difference in their test results, implying that the students, after having been exposed to collaborative learning, gender group activities, were significantly affected in their mathematics achievement. The result rejects the null hypothesis stating that there is no significant difference in the mathematics achievement in the three different gender groups.

## Conclusions

Based on the results, though the three gender groups obtained different means in their formative tests, the differences was very minimal, negligible enough to say that all students under study performs similarly when working individually. In the collaborative learning activities, the three gender groups obtained high differences in their mean, where the all-male groups performed very far from the all-female groups, which can be concluded that female students when grouped together turns out better results than all male students grouped together. The mean scores of the three gender groups in their Math achievement test given after the experimentation, tells that though the all-male group obtained the lowest mean, they still performed very well in their achievement test.

Based on statistics, the following conclusions were formulated; (1) there was no significant difference in the mean scores obtained by the three gender groups in their formative test, probably because the students under study have similar abilities when working individually; (2) there was a significant difference in the mean of the collaborative learning activities in the three gender groups, probably because performance of collaborative learning activities depends on who do we work with; and (3) the mean in the math achievement test of the three gender groups varies significantly due to the effect of the collaborative learning activities.

## Recommendations

Based on the findings of the study, the following recommendations are presented; (1) mathematics teachers should know their students before starting the course to enable the former to select and employ the appropriate teaching approach and strategy; (2) teachers should utilize collaborative learning and gender groupings as a teaching approach to ensure learning in the student; (3) school administrators should encourage professors to use other teaching approaches like collaborative learning and gender groupings making the students the center of the teaching-learning process; (4) school administrator should send instructors and professors to seminars on new trends in education, strategies and approaches; and (5) future researchers conduct a similar study.

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# Teachers Emancipation in Transformation of Teaching Management in the Classroom through Action Research

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## Abstract

The departure of this case study focuses on investigating and assessing the expansion in emancipation among secondary school teachers in Sabah, Malaysia. The main objective of this paper is to explore on the teachers' emancipation by assessing on their teaching management in the classroom. Teachers' emancipation is defined as practical action upon the change in transformation of teaching management in classroom. This study employs a qualitative research method by implementing interview, observation and document analysis. This study conducted among experienced teachers which employed a purposive sampling technique among seven secondary school teachers in Sabah. The data was analysed via Within-Case analysis and Cross-Case analysis. Thematic analysis was used to evaluate the pattern of theme over the data collected. The results suggest that the action research practice was able to create teachers' emancipation in the transformation of teaching management in classroom. It is also suggested that there was a change in management of teaching practices in classroom after conducting the action research. Action research practice has helped the teachers to be more critical with the ability to question their own teaching practices in classroom. Teachers are also able to use their experience while applying changes with their practices in classroom. This study brings a new dimension of a culture in teaching management through action research in classroom.

**Keywords:** Teacher Emancipation, Action Research, Transformation of Teaching Management, Questioning About the Practice (Reflective), More Criticize, Experience

## Introduction

The underpinning theory of the emancipation concept by the critical theory of Jurgen Habermas (1970) emphasized on the emancipation issue by strengthening individuals' awareness on the structure that hold their freedom. Hence, action research is one of the ways that teacher can use to put Habermas ideas on emancipation into practice (Grundy, 1982). Action research practice give teachers freedom to investigate and reflect. Eilks and Ralle (2002), in Naaman R.M and Eilks, (2011) stated that teachers' emancipation really develops through action research practice in the classroom. As a matter of fact, teachers who possess critical realization will stand a greater chance to perform the transformation and improve the educational management as well as being able to translate the existing curriculum to meet the needs of the classroom context.

Action research practice serves as a mean, where teacher can grow critical awareness towards teaching and learning problems in the classroom. Action research matches the nature of problems in teaching and learning which entirely unique and exclusive (based on the current setting). Ayers (2004) claims that teacher's emancipation means the freedom that covers the aspect of developing critical awareness among the teachers towards their own practice in the

classroom. Therefore, teachers are also involved in the investigation process and becoming creative investigator for problems that arise. Schon (1987) also claimed that action research practice also help teachers to observe, understand and becoming a reflective practitioner. By practicing action research, teachers can become more critical and sensitive towards transformation (Elliot, 1991).

Realizing transformation requires changes in social practices in the classroom, with changes in the mechanism of control in making top-down decisions and the attitude of conformity to team learning and collaborative problem solving and reflective thinking, critically and productively. This will encourage teachers to be more flexible and responsive of their teaching practices. Transformation of teachers' practice will bring new dimension in the culture of teaching and learning at school. Each individual lives are controlled by various possibilities in social system, however each individual have their own ability to learn and build up new action strategy based on the thought of making decision regarding their practice. This means that teachers are empowered to make their own decisions about practice in the classroom. They have to be able to think, reflect, evaluate, and criticize their own practice in order to improve their teaching and learning practices in the classroom to meet the demand of the rapidly developing intellectual growth. Therefore, action research practice provides space for teachers to perform critical reflection on their daily routine, practice and goals (McNiff, 2005).

Transformation in teaching practices that can be carried out to challenge the teaching profession still bound by traditional methods, rigid and lacking experience with modernization and innovation. These transformations have a positive impact on students and contribute to the increase in the professional development of teachers in schools. However, this kind of transformation depends on teachers' readiness to change the existing practices, while each individual will have difficulty in changing their habits.

## **Purpose of Study**

The purpose of this research is to seek a better understanding on the effects of action research practice towards teacher's emancipation in transforming the educational management in the classroom. Therefore, this case study's ultimate goal is to investigate and explain the ability of those teachers who conduct action research in their classroom to perform transformation in their educational management.

## **Objectives of Study**

The aim of this study is to appreciate and learn about the transformation of classroom teaching management through action research practices.

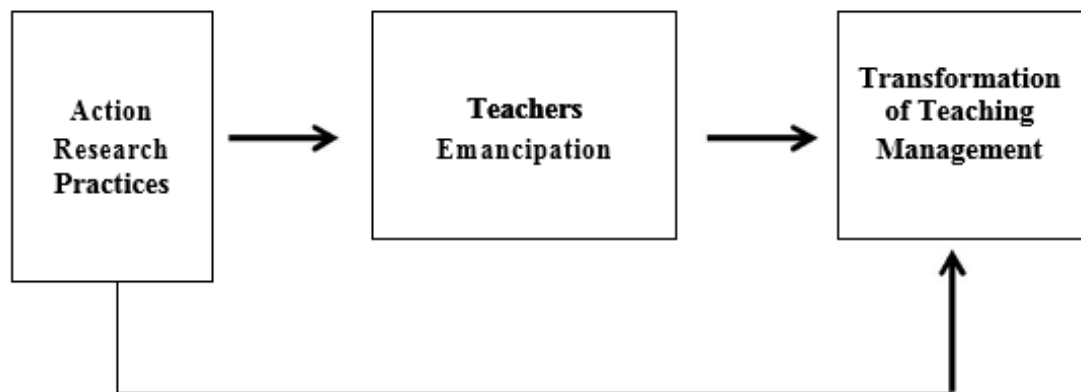
## **Research Questions**

This study is to answer the question on how the practice of action research by teacher's at school can develop and expand the teachers' emancipation and able to perform the transformation of teaching management in the classroom.

## Conceptual Framework

The conceptual framework of this research is adapted from Critical Emancipatory Action Research. This model was developed by Grundy (1982). The concept is based on critical emancipation that also echoes the socio-critical theory by Habermas (1970). This model emphasizes upon building independent practices within individual through critical realization towards changes they wish to perform.

The main theory that dominates this research is the socio-critical theory by Habermas (1970). This theory focused on the emancipation concept or individual freedom to equip individuals with the critical awareness to narrow the gap between the social structures even though the ability to do so face various constrains in terms of social, cultural and political invasion. Meaning to say, although each individual has the awareness that they have the ability to act and change their socio-economical state, they encounter many restrictions in the form of social, cultural and political domination (Grundy, 1982).



**Figure 1: the research conceptual framework**

**Source: Grundy (1982)**

The conceptual framework has three main components namely; action research, teachers' emancipation and the transformation of education management in the classroom. Each element is based on many theories and models that are related to the research. The first phase of this framework explores the essential elements that dominate the action research practice in the classroom. It offers broader explanation on each element in action research. The second phase on the other hand, is to investigate the relationship between action research practice and teachers emancipation in managing leaning in the classroom. Meanwhile, the third phase is the expansion in developing emancipation of teachers in making transformation in their practices. All in all, these phases will give a thorough explanation on how teachers understanding of action research develop their emancipation in transforming the education management in their classroom.

## Research Methodology

This study used a qualitative case study method. The appropriate choice of this method of the study conducted by researchers was find suitable depth and breathe of meaning and understanding of the phenomena. The main focus of this research is to investigate and to assess the action research practises among secondary school teachers on expanding teachers' emancipation in implementing the tranformation of teaching management practises in classroom. The case studies also help researchers to understand and strengthen the situation or phenomenon, programs, processes or social groups in depth (Merriam, 2002; Yin, 2003).

The determination of the sample was based on purposive sampling design and which are above the sample selection criteria specified. Participants were the teachers who have served for more than 10 years and carried out action research at least once in school. Furthermore the selection of participants in the study was also based on their agreement and willingness to participate in this research. The study was conducted on three experienced teachers, in one secondary school in Kota Kinabalu, Sabah, Malaysia. Selection of this school as a research site was based on the frequency this school had carried out action research. This research was categorized as multisite study with multiple sites. Data collecting was analysed using Within-Case analysis and Cross-Case analysis. This study used interviews, observation and document analysis as a procedure for data collection. Triangulation methods were used to allow comparison and consolidation of data. Data was analysed using Thematic Analysis method for identifying, analysing and reporting themes within the data (Stenner, 1993, Ussher and Moony-Somers, 2000).

**Table 1: Phases in Thematic Analysis**

Phase Analysis	Process
1	Familiarize yourself with the data
2	Generate initial code
3	Search theme
4	Review the theme
5	Defining and naming theme
6	Generate reports

## Results

### **Criticize With The Ability To Question Their Own Teaching Practice**

The research findings showed that all the participants had full critical awareness on self-practices in the classroom, at the same time it is the existence of the development process of the emancipation of the teacher in the classroom teaching management. The process of reflection of the participants is one way for them to be questioned about their existing practices. All of the participants are always reflect on their own practice and their environment to identify the problems related to the teaching management in the classroom. That means the participants capable to generate new ideas about teaching practices in their classrooms.

All the participants reflect their teaching in the classroom carefully and systematically either through observation, student work, sharing with colleagues or interview students in the

classroom. The main focus of reflection by all the participants is to improve of their teaching in the classroom, especially in terms of selection of teaching approaches and strategies. Similarly, the selection of teaching methods and techniques that is more effective was done by the participants.

The research finding also found that all the participants enhance their critical thinking to identify issues with compiling information obtained by type and priority, then analyze and evaluate the reasonableness of the existing teaching management, before making conclusions and decisions to solve the problem. They are always looking for opportunities to improve their thinking skills to more critical and creative towards the transformation of teaching management in the classroom. They also focused on the selection process and the preparation of strategies, methods or teaching techniques, based on the level and interest of students in order to enhance students' understanding in the classroom. This had indicated that there were chances for the participants to speak and voice out opinions as well as ideas on respective practices and at the same time giving the chance for them to improve their self-development especially on their practices in the classroom.

The participants are also capable to make decisions for their own teaching practices such as pedagogy, teaching methods and techniques that are appropriate to the level of the students in the classroom. They were focus on teaching management planning to improve their abilities, potential, knowledge, talent, confidence, competence, attitudes and social situation of their environment. They also use existing knowledge to improve students' conceptual understanding of taught in the classroom to adapt other appropriate teaching techniques either through schools or academic programs in partnership with other colleagues. Although each of the participants had a different types of experience but it is undeniable that their actual experience to teach directly in their classrooms to provide a reflective process. Hence those experienced by individual study participants led them to think and give meaning to their experiences.

## **Discussion of Findings**

Research findings also indicated that the action research practices were able to expand the emancipation to do the transformation on teaching management in the classroom. Ayers (2004) deciphered that emancipation in the educational context was the teachers that understood and practised the freedom concept which involved the development of critical awareness, participation in action collectively for the social justice in schools especially in the classroom.

Research participants had full critical awareness on self-practices and development. They always develop their own capacities by stressing the equality value and democratic principle upon their practices in the classroom. They were concerned on students' issues that involved teachers' teaching and always be ready to change daily teaching practices suitable with the current context in the classroom.

The results suggest that all study participants were planning to continue their practice through a process of critical thinking with regard to the constraints that exist in the context of the classroom environment. Halpern (2003) stated that critical thinking is thinking that focuses on purposeful, reason, and then formulate goals, as well decision to solve the problem. Respondents also organize the teaching strategies to be developed in order to diversify the atmosphere of teaching and learning in the classroom is not rigid, frozen and most importantly it is able to challenge the abilities of students at an optimal level.

## Recommendations

The practice of action research will undoubtedly pave the thought of every individual who holds educators to have the responsibility to consider multiple perspectives when making decisions in the management of teaching quality in the classroom. Teachers as researchers approach will provide a space for teachers to design their own innovation based on the observation and evaluation.

This means it can enhance teachers' understanding of the practice and make improvements. In addition teachers are not just focus on the delivery of content subject taught to students, but on the contrary. Hence the idea of teachers as a researchers need to be developed with the cooperation and involvement of professional researchers or lecturers from higher learning institution in guiding teachers to do research that can establish a culture of research and reflective.

## Conclusion

Exploration on the practice of action research on the development process of teachers' emancipation to transform the management of teaching in the classroom provides four key components that dominate the questioning awareness about the practice and critical and creative thinking. The practice of action research be an alternative for the realization of freedom of teachers to make decisions and to change their ways by identifying the constraints that exist for each change you would like to do (Feldman, 2002). Action research also can improve self-esteem and autonomy of teachers in the classroom and increase job satisfaction and pedagogical practices of teachers (Johnson, 2002).

The expansion of teacher's emancipation in teaching management through action research practice was able to instil awareness to the teachers to develop intellectual ability on each own practice in the classroom. The expansion process of teacher's emancipation was identified via the teachers' practices which stressed on equality concept and democratic principle in the teaching management in the classroom.

Emancipation development of teachers in the management of teaching in the classroom through the practice of action research seeks to realize a new dimension in the culture of teaching and learning in schools. It provides an opportunity for learning more dynamic, interesting and can improve knowledge of relevant and useful to students. The teachers will be free to voice their ideas and opinions to improve other own practices in line with the concept of democratic practice aimed at social justice in the classroom. Somekh and Zeinchner (2009) also stated that that action research as a strategy to reform the schools to produce reflective teachers with the development of partnerships, a reflection that leads to self-control, as well as excellent practice capable of meeting current needs.

Ideally, emancipation was an abstract term, the existence of teachers' emancipation was identified and polished deeper through its' meaning concretely based on the data received from all research participants involved in this research. Researchers would identify the expansion of teacher's emancipation in this research through what had been personally interpreted by research participants about the transformation on teaching management in the classroom. Every research participant would explain the individual expansion process of emancipation through teaching management transformation in the classroom. It was translated in the concrete form or in the form that could be understood by every individual.

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# What Degree Person-Academic Environment Congruence Among Student Teachers' in Malaysian Public Institutions of Higher Education?

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## Abstract

This study investigated the current situation about the degree of congruence between personality student teachers' type with their academic environment. This study used a mix methods sequential explanatory design. Data for this research were collected through survey questionnaires and semi-structured interviews. Qualitative data were analyzed using thematic procedure, while quantitative data were analyzed using SPSS version 21.0. Stratified random sampling technique was used from the final year student teachers' in 7 Malaysian Public Institutions of Higher Education. The results indicated that the degree of congruence is modest good among student teachers' with their academic environment. Findings point to the importance of congruence was shown a significant increasing awareness of passion to learn their academic major and improve their jobs skills more effective. Implications from this study provide strong support from the notion that learning communities play an academic socialization task.

**Keywords:** Personality, Academic Environment, Congruence, Student Teachers

## Introduction

Teacher's education training responsible in the Malaysian Institutes of Teacher Education (ITE) and Malaysian Public Institutions of Higher Education (PIHE) wheres both of them has been under the purview of a division in the Ministry of Education called the Teacher Education Division. Besides, the teacher training colleges in ITE and faculties of education in PIHE, was provide teacher training for teachers to be absorbed in government schools. Initially, teacher training colleges undertook the training of teachers for primary schools while the PIHE were responsible for secondary schools. This too has changed over the years and now both ITE and PIHE train teachers for primary and secondary schools.

However, based on the current study have issues that teacher training in PIHE is still less efficient to produce teachers who integrated from the spiritual, physical and emotional with their intellectual, (Saedah & Mohammed Sani, 2012). Also have issues about professional development courses are studied in PIHE is not much help to enhance the experience of student teachers' (Pauline Swee, Noor Shah & Kung Teck, 2012), still have low student teachers' leadership attitude (Ruzina, 2012), medium in managing the extra-curricular activities at campus (Rajendran et. al, 2008), and also student teachers' with low soft skills in the classroom (Kamarudin, Ruhizan & Ramlee, 2014). In the same way, the concept of teaching in PIHE has

been improved in terms of pedagogy (Pauline Swee & Kung Teck, 2015) and also increased the teaching initiatives through sharing practices in the community (Ann Rosnida, Zainor & Suseela, 2013) as an effort to develop a range of skills and multiple experience (Zaini, 2010).

However, there is no doubt that student teachers' have an interest and motivated at work of education or teaching task, their can perform work well (Sidek et. al, 2008). Who student teachers' are congruent with subject major can perform their tasks excellently (Wong, Tang & Cheng, 2014), also can create social interaction with their friends and lecturers as well as motivator and supporting them in campus (Muhamad Sauki, 2012). Hence point out that, there are still individual student teachers' who are not congruent with their environments. As explained by Zunker (2012) and Holland (1992), there are an important congruent with environment, can produce to the individual job satisfaction because they are among in community who have the taste and same requirements.

### **Person-academic environment congruent**

Requirements student teachers' congruence with their environment can be categorized into one of six personality types of Holland like Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), or Conventional (C). Based on the theory of typology Holland (1992), the types of individual personality is formed by the interaction between culture and character (Holland 1992).

#### **a) Holland's Typology Theory**

In this study, the personality refers to the individual identity and skills based on the characteristics student teachers' academic major. Meanwhile, academic environment refers community in faculty of education training environment. Academic environment characteristics formed according to interests, efficiency and environmental trait and available with individual motivation, knowledge, insight, understanding and their ability on profesion (Sidek, 2008). Environmental components are usually built by an organization that is in the same community group (Engestrom, 2001). For example, the academic environment in the PIHE campus community. Congruence process can be happen inside academic environment community through student teachers' engagement in campus activities.

The concept of engagement can be defined in a variety of situations. Engagement in the vicinity of campus PIHE can be explained as an investment to improves an individual cognitive level (Ann Rosnida, Zainor & Suseela, 2013) or to improve knowledge and learning to control level of emotional through participate in activity at campus (Zepke & Leach, 2010). Engagement can also be defined as an individual's involve in any program and follow any policing to establish of high-quality experience in teaching profession (Engestrom & Kerosuo, 2007).

#### **b) Activity Theory**

Based on activity theory (Engestrom, 2001), a collaboration between the members who are in the same system, objective and sharing the ideas together to reach a consensus could be explained thoroughly. In this study, student teachers' are subjects in the vicinity of the campus

community. The mediation or the socialization process is formed where the student teachers' as fulfill objectives their academic major. And then, interaction coming up among service requirements (either technical or symbolic) with learning situations needed to bring student teachers' qualified outcome. The overall impact of reciprocal act of student teachers, who can be neither motivation nor an obstacle to further action.

Activity theory is an action towards achieving specific objective, have been formed by individual or group as engagement process to create congruence in campus environment. However, awareness about 'passion' in education career through on-campus learning environment is among the best efforts to build student teachers image, lifestyle and academic excellence. The academic environment includes socialization styles, time management, activity, learning and self-management.

### **Benefits of Congruent**

Congruence process start from student teachers' make a choice of academic major. Then, the process of socialization in the environment of each academic major is requiring members are actively involved in it. At the end, of the socialization process is the congruence between six individual personality types to determine the suitability with six different types of their academic environment.

Congruence process is important because it can affect the performance, health and strength teachers in all disciplines (Mastura, Ishak, Hamdan, 2008; Hirschi, Niles & Akos, 2011). Nagendralingan, Rajendran, Amir & Lim, (2014), also said if the personality type of the individual and the campus environment congruent via academic majors can encourage individuals to learn more conscientious and more effective. The benefit of congruence toward student teachers in teacher training centers, are possible values and ethics experience what they learned can be practiced until to the actual workplace (Zepke & Leach, 2010).

Conceptually, this paper aim to identify the degree of congruence among student teachers' with their academic environment in Malaysian Public Institutions Of Higher Education campus.

## **Methods**

This study was conducted based on the design of *Mixed Method sequential explanatory* (MMSE) to explain social phenomena that can describe the situation student teachers' in campus environment (Hesse-Biber, 2010). The MMSE process in three phases. The first phase of the quantitative survey method to see 'how' degree of congruence student teachers' in the academic environment (Teddlie & Tashakkori, 2009). The second phase using qualitative phenomenon to see social phenomena 'why' of things that can affect the degree of congruence student teachers' with their community (Hesse-Biber, 2010). The results from the second phase of this data are important to be complement the first phase data (Teddlie & Tashakkori, 2009). An the end, the data were combined and interpreted.

The instrument Self Directed Search (SDS) Easy -Form renovated by Amla (1984) are used to identify career interests of individuals based on personality type. Meanwhile, individual environment aspects were categorized based on academic majors are measured using the Review of Work Values by Super (1970).

Respondent this study are among student teachers' in the final year in teacher's education training at 7 Malaysian Public Institutions Of Higher Education. A sample of 1026 peoples was selected by stratified random sampling in answering the questionnaire and 10 peoples in semi-structured interviews of the same population selected by purposes sampling.

## Results

Analyzing of descriptive statistics to identify person type, academic environment type and the degree respondents congruence.

### 1. Person-Academic Environment Type

From categorizing 19 academic major (n=1026) involved only five groups of person types derived like realistic, investigative, artistic, social, and conventional. No respondents from enterprising group. Refer to table 1, the calculation of 3 letter study code with the highest count from respondents who answered 'Yes' to score '1' for each of the answers that have been marked and categorized according to six type personality Holland.

**Table 1:** Person Type According Academic Major

Personality Type	Academic Major	N (1026)	Scale (mean)						3 Study Code
			R	I	A	S	E	C	
Realistic	Vocational Skill	30	3.20	3.60	2.93	3.43	3.40	2.87	ISE
	Arggricultural Science	10	3.10	3.10	3.10	4.10	3.00	2.20	SIR
Investigative	Geography	23	3.35	3.91	2.52	4.17	3.74	2.70	SIE
	Mathematics/Science	108	3.23	3.51	2.65	3.59	2.97	3.48	SIC
	Physics	77	2.74	3.88	2.66	3.73	3.62	3.00	ISE
Artistic	Language	141	3.15	3.16	3.77	3.86	3.34	2.35	SAI
	Art	18	3.11	3.22	3.44	3.89	3.50	2.22	SEA
	Inform. Technology	54	3.24	3.31	3.24	3.83	3.33	2.35	SEI
Social	Consumerism	30	2.70	2.97	3.83	3.87	3.23	2.30	SAE
	Economic	11	2.64	3.45	3.36	3.36	3.09	3.73	CIA
	Domestic Economic	60	2.77	3.34	3.62	3.87	3.40	2.23	SAE
	Counselling	143	3.13	3.38	3.19	3.90	3.87	2.09	SEI
	Moral Education	45	3.20	3.22	3.38	3.67	3.47	2.22	SEA
	Physical Education	41	3.05	3.17	2.49	3.61	3.07	3.17	SIC
	Pra-School Education	40	3.30	3.30	3.53	3.60	3.72	3.05	ESA
	Special Education	97	2.43	3.24	3.77	3.78	3.43	3.15	SAE
	History	75	3.14	3.52	2.87	3.60	3.15	2.24	SIE
	Commercial	10	2.30	3.10	3.00	3.80	2.50	3.50	SCI
Conventional	Business	13	2.69	2.62	2.62	3.77	3.64	3.54	SEC

Note: R=Realistic, I=Investigative, A=Artistic, S=Social, E=Enterprising, C=Conventional

Based on table 1 in column 3 study code showed the respondents were able to highlight the social type although social type code (S) in different positions. However, from the group of academic economists have shown no social or artistic types. These two type (social and artistic) considered by Holland (1985, 1992) is a suitable and stable type (Kaub, Karbach, Spinach & Brunken, 2016) for individual teachers in the teaching profession area. Table 2 is a narrative data that describes the characteristics by two respondents from in the same economies group.

**Table 2:** Characteristics And 3 Code Economies Person Type

Respondent	Category	3 Code	Characteristics
GP6	Person	I	Carefull, analitical, pesimistic, introspective
		S	Empatic, idealistic
		E	Energy, optimistic
	Environment	S	responsible, social, integrate
		E	Optimistic
		R	Materialistic
GP8	Person	R	consent
		E	achievement, optimistic
		C	Obey order, not imaginative
	Environment	S	Empatic, friendly, sosial, reasonable
		E	sociably, achievement
		C	Obey the rule

GP = Student Teachers'

Note: R=Realistic, I=Investigative, A=Artistic, S=Social, E=Enterprising, C=Conventional

According to a transcript data from two respondents (GP6 and GP8), both of them can show up good respond with social types (SER = SEC) in environment social type. This is because, both respondents tried themselves for learning from their environment and the communities are congruent. Among transcript data said;

..led me, like give inputs, so that we can think itself, make own reflex with what is going on our environment.. (GP6/L150-L153/2015)

..when already a lot of activity in programme that is compulsory have to follow, gradually feel awkward lost, I can adapt well now.. (GP8/L108-L110/2015)

As in the Holland's typology theory (1985), if the social code at primary position, that considered suit as a person personality types. Meanwhile, the secondary and tertiary code position that is defining more specifically their person personality (Holland, 1985)

## 2. Significant Level For Person-Academic Environment Congruent

And then, because the survey data is not normal and in homogeneous categories, then *Kendall Test Coefficient (W)* is used to see the respondent significant level of person types with their academic environment. Based on table 3, data showed 15 academic majors groups reach a level of significance both to the level of  $k < .01$ . Meanwhile, four other academic major groups namely group in economics with the  $w = .057$  ( $Ik = 5$ ,  $k = .676$ ), in business the value is  $w =$

195 (Ik = 5, k = .026), in vocational skills the value is w = .034 (Ik = 5, k = .396), and physical education the value is w = .054 (Ik = 5, k = .049) showed insignificant level with k > .01. Nevertheless, the overall degrees of congruence (Dk) are at a moderate level with Dk 5.

**Table 3:** w Value According Academic Majors

Academic Major	n	w	$\chi^2$	Dk	k
Language	141	.221	155.544	5	.000
Art	18	.341	30.661	5	.000
Consumerism	30	.347	51.991	5	.000
Commercial	10	.436	21.813	5	.001
Economic	11	.057	3.159	5	.676
Business	13	.195	12.688	5	.026
Geography	23	.168	19.319	5	.002
History	75	.172	64.341	5	.000
Mathematics / Science	108	.075	40.521	5	.000
Physics	77	.119	45.986	5	.000
Vocational Skill	30	.034	5.163	5	.396
Argicultural Science	10	.304	15.175	5	.010
Domestic Economic	60	.302	90.453	5	.000
Information Technology	54	.170	45.807	5	.000
Counselling	143	.278	199.123	5	.000
Moral Education	45	.145	32.593	5	.000
Physical Education	41	.054	11.123	5	.049
Pre-school Education	40	.197	39.357	5	.000
Special Education	97	.195	94.358	5	.000

Note: N= 1026, sig. k < .01

### 3. Degree of Person-Academic Environment Congruent

Index congruence (Ik) by Winggis, Lederer, Salkowe and Rys (1983) was used to calculate the degree of congruence (Dk). Three letter study code and then compared with the three letters code Holland (Rosen and Holland, 1977) which is considered suitable with respondents' academic major in education field.

**Table 4:** Degree Of Congruent By Person Type Analysis

Person Type	Scale (Mean)						3 Study Code	3 Holland Code	Ik	Dk
	R	I	A	S	E	C				
Mean	3.21	3.68	2.37	3.34	3.62	3.17	IES	SAE	3	Moderate
(Sd)	(.939)	(1.079)	(.701)	(1.066)	(.912)	(.986)				

Table 4 shows the analysis degrees of person- academic environment congruence among respondents. Although personality and academic environment 3 code such 3 study code (IEA) and 3 Holland code (SAC) is different, but both for index of congruence (Ik) which has been obtained this study is Ik3. Based on Wiggins and Moody (1981) skor level, this value in categorized as moderate degrees.

As a complementary data, from the transcript data against engagement activity in community environment, found that the motive of sociably respondent among between friends,

lecturer and staff administrator. Refer to table 5, transcripts data explain the sociably created to establish good relations with the community, committed in any entry and increase their motivation. Example transcript;

..here a lot of friends that change my sociaby, experience also a lot especially time having activity together, a lot of new things learned. (GP9/L211-L212/2015)

..here, this campus is good convenient to all.. because new things a lot of needed to learn here. So friends from those other ideology, any field needed.. (GP7/L203-L205/2015)

..if have a lecture friendly with students, so easy to we approce him to ask,, maybe if lecture like that are more always we will meet him to discuss. (GP6/L136-L138/2015)

**Table 5:** Engagement Motive In Academic Environment

Thema	Concept
Good Relationship	Increase of desire of friends
	Friendly / very good communication
	Improving communication techniques
	Openness to welcoming friends
Committed	Often working together
	Increase work together
	Sharing attitude
	Improve work more effectively
Motivated	Increasing level of patience
	More positive thinking
	Improve thinking critically
	Improve self confidence

These findings showed a significant relationship between personality student teachers' type and academic environment congruence revealed a number of challenges faced their engagement in campus activities. They also were shown a significant toward increasing awareness of passion to learn their academic major. This result data explains, how the importance of congruence about interests, values and skills student teachers with the adjustment process, the selection and to prevent fatigue when either in teacher's training or in employment.

## Discussion

The results of the present research, degree of congruence is moderate among student teachers' with academic environment whose to explain the selection and choosing the academic major that has been done by the PIHE is suitable and in accordance with student teachers' personality type. Data of this study support findings by Koen, Klehe and Vianen (2012), from sums up the individual who left university life will begin the process to creating congruence with the working environment as well. Therefore, experience in campus and decided to choose the right career is very important.

Although, from this study there is a difference among 3 letter study code (IES) with 3 letter Holland code (SAE). However, 2 letter study code as Enterprise (E) type and Social (S) types is equal with 3 letter Holland code, but only differ in the position that code. Researchers found that more prominent student teachers with the Investigative (I) type. Whereas their skills more scientific, mathematical and leadership capabilities competencies. This data accordance by Pauline (2012) research and also by Kamarudin, Ruhizan and Ramlee (2014), that the curriculum in academic programs at PIHE must have learning outcomes for fulfil the human capital that is intended as knowledgeable in their field, technical skills, communication, problem solving, teamwork, information management, entrepreneurial attitude and leadership. All of this trait can be highlighted by the student teachers' based on evaluation through tests of significance level person-academic environment congruence that has shown good levels of significance with each academic major.

As the recommendations by Engestrom (2001), on transaction activity among individual needed feedback among members in the same group to reach an agreement to share the concept of the environment whether it is right and agreed. Meanwhile, based on Holland's career ideology, if the individuals are not congruent with their task at any assignment but when they can act congruent in activities in their environment, it shows that person are still in the process to understanding of the field their taken or maybe opportunity factors that person to act in environment still not comfortable enough. However from this study data, the environmental conditions at the PIHE campus as a network very strong support structures that can be described as inspiring, motivating and challenges that can help in generating successful student teachers as build experience in education.

## **Conclusion**

In conclusion, student teachers' engagement in the PIHE campus activities will be able to improve the ability of self congruence and can bring experience jobs skills more effective. Particularly those involving socialization, learning and collaboration activities of cultural diversity, ethnic and personality of different environments to create quality teachers. Implication from this study provide strong support for the notion that learning communities play an academic socialization task.

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# **The Use of Multiple Intelligences Approach and Alternative Assessment in Teaching**

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## **Abstract**

The purpose of this study was to investigate the use of multiple intelligence and alternative assessment in teaching. This research was done to identify teachers' level of multiple intelligences which consists of visual spatial, linguistic, naturalist, logical-mathematical, intrapersonal, interpersonal, musical, kinesthetic. This study also investigates the application of alternative assessment among teachers in teaching. A total of 191 teachers from selected schools in Selangor, Malaysia were involved in this study. The instrument consists of items related to the theory of Multiple Intelligence and alternative assessment in teaching. The data was analysed by using Statistical Packages for Social Sciences (SPSS) version 23. An analysis of mean, standard deviation, and Pearson correlation were used in the data analysis procedure. The findings showed the four dominant intelligences used by the teachers which were logical mathematics, intrapersonal, naturalist and interpersonal. For application of alternative assessment in teaching, there are three constructs which are preparation of alternative assessment, implementation of the alternative assessment and reflection in using alternative assessment. There is significant correlation between multiple intelligence and alternative assessment in teaching. Hence, this finding implies that teachers need to be exposed to multiple intelligences and alternative assessment. Teachers with these multiple intelligence abilities and good understanding of alternative assessment would be able to help enhance student learning in the classroom.

**Keywords:** Alternative Assessment, Multiple Intelligence, Assessment, Teachers, Teaching.

## **Introduction**

Alternative assessment goes beyond the assessment of knowledge and facts to the more complex goals of assessing and developing life-long skills of creative thinking, problem solving, summarizing, synthesizing and reflecting. Alternative assessments measure performance in form other than traditional-paper pencil tests. Alternative assessment refers to a classroom based, qualitative, informal or performance assessment (Janisch, Liu, & Akrofi, 2007).

Vinas & Perez (2015) carried out a study on the implementation of alternative assessment of the 43 students aged 15 to 16 who had low of English proficiency. The results of the analysis show that the implementation of alternative assessment could increase the motivation and give positive impact on academic performance of the students. Janisch, Liu & Akrofi (2007) state that alternative assessment has massive potential to reverse the traditional

paradigm of students' passiveness and replace with students initiative, self discipline and choice. The students are able to collect their work by using portfolio development, students select pieces that are best evidence of their achievement. They do their own reflection at the end of the alternative assessment.

Multiple Intelligences need a specific assessment to measure the multiple intelligence profile of the students. Gardner states that assessment on intelligence is important in constructing multiple intelligences profile as result assessment is important. According to Seyyed Ayatollah & Zaehra Jozaghl (2010) multiple intelligences aim on individuality of the learners and their different capabilities which helps students to learn the way they are skilled at. Knowledge on Multiple Intelligence theory is important for each teacher to identify intelligence profile of students who having difficulty in comprehending the subject and to prepare appropriate activities for each of the Multiple Intelligence profile.

Gardner (1983) and Douglas, Burton and Reese-Durham (2008 ) stated that multiple intelligence has challenged the notion that intelligence is merely a score made up by a typical standardised pencil and paper test which is used to process information that can be activated in a cultural setting to solve problems or create products. Mc Clellan (2008) stated that teachers must be able to easily and accurately identify students' intelligence ranking in order to implement various teaching methods. According to Nuri Emmiyanti, Muhammad Amin Rasyid, Muhammad Asfah Rahman, Azhar Arsyad and Gurfan Darma (2014) the teacher as an educator should be able to apply the multiple intelligence model that integrates high curiosity characters such as creative, critical thinking, potential opportunities and self efficacy of the students. Moreover, Multiple Intelligence theory provides a framework for the teachers to reflect on their best teaching methods for their students. According to Stanford (2003) the Multiple Intelligence theory also helps the teachers to use the suitable teaching method as well as the suitable learning materials, or to tools to help enhance the students' learning process.

## Methodology

A study was carried out to explore the questions related to multiple intelligence and alternative assessment among school teachers in Selangor, Malaysia. The objectives of the study are as follow:

- To identify the type of multiple intelligence among the teachers.
- To investigate the level of the application of alternative assessment among teachers.
- To investigate the correlation between multiple intelligence and alternative assessment of the teachers.

191 respondents participated in this study and were required to answer the questionnaire that had been validated by the experts in this field. All of the respondents were teachers from nine schools in Selangor. The questionnaire consists of 115 items and is divided into several sections. Part A is the demography section, part B consists of multiple intelligence related questions, Part C is Higher Order Thinking Skills and part D is the section on alternative assessment.

The score for the instrument ranges from 1.00 (minimum) to 4.00 (maximum). These scores are divided into three levels which are low, moderate and high. The division of mean values and their respective levels are shown in Table 1 below.

**Table 1:** Total level of mean classification

Mean	Level
1.00 -2.66	Low
2.67-3.33	Moderate
3.34-4.00	High

The questions aim to gauge the teachers' multiple intelligences and the level of the application of alternative assessment of the teachers. The respondents were given specific time to answer the question and most of them answering the questionnaire during their free time. They were given a brief explanation about the questionnaire before answering it.

## Results & Discussion

The results were manifested as the eight types of multiple intelligences which are visual spatial, linguistic, naturalist, logical mathematical, intrapersonal, interpersonal, musical and kinaesthetic of the teachers. The total mean of the overall respondents' multiple intelligence has mean 2.68 with standard deviation 0.734. Table 2 shows the summary for the mean of the types of multiple intelligences.

**Table 2:** The mean of the types of multiple intelligences

Type of Multiple Intelligence	Mean	S. D	Level
Visual Spatial	2.40	0.763	Low
Linguistic	2.50	0.788	Low
Naturalist	2.78	0.849	Moderate
Logic Mathematics	2.70	0.726	Moderate
Intrapersonal	3.08	0.619	Moderate
Interpersonal	3.12	0.624	Moderate
Musical	2.43	0.832	Low
Kinesthetic	2.46	0.763	Low
Multiple Intelligence (Overall)	2.68	0.734	Moderate

From the findings, it can be concluded that logical mathematics, naturalist, intrapersonal and interpersonal intelligences are the dominant multiple intelligences among the respondents. This finding corresponds with the findings in a study by Tajularipin Sulaiman, Abdul Raub Abdurahman and Suzieleez Syrene Abdul Rahim (2010) on teaching strategies based on multiple intelligences theory among science and mathematics secondary school teachers.

Table 3 below shows the findings for the level of application of alternative assessment in teaching among teachers. The four levels of application are teachers' preparation, usage in teaching, and reflection. The level of application of alternative assessment in teaching among the teachers is moderate with an overall mean of 2.830 and standard deviation 0.667. This finding coincides with the findings by Vinas & Perez (2005) and Janisch, Liu and Akrofi (2007) who stated that the level of application of alternative assessment among teachers is at moderate level or high level.

**Table 3:** The level of application of alternative assessment in teaching

<b>Application of Higher Order Thinking Skills</b>	<b>Mean</b>	<b>S.D.</b>	<b>Level</b>
Teachers Preparation	2.857	0.677	Moderate
Usage In Teaching	2.778	0.644	Moderate
Reflection	2.856	0.676	Moderate
Alternative Assessment (Overall)	2.830	0.667	Moderate

**Table 4:** Pearson's Correlation (r) between teachers multiple intelligence and the application of alternative assessment in teaching.

<b>Type of Multiple Intelligence</b>	<b>Mean</b>	<b>S. D</b>	<b>Level</b>
Visual Spatial	2.40	0.763	Low
Linguistic	2.50	0.788	Low
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Musical	2.43	0.832	Low
Kinesthetic	2.46	0.763	Low
Multiple Intelligence (Overall)	2.68	0.734	Moderate

Table 4 above presents the correlation between teachers' multiple intelligences and the application of the alternative assessment of the respondents in teaching. The result showed that there is significant correlation between Multiple Intelligence and application of alternative assessment in teaching of the respondents with correlation,  $r = 0.609$ . This finding showed that teachers who have multiple intelligences will apply the alternative assessment in teaching more frequently. According to Gardner (2011), each individual possesses all the multiple intelligence, however the strength of each of the multiple intelligences are different from one individual to another. The findings also showed that the multiple intelligences of the teachers are at the strongest on logical mathematics, intrapersonal, interpersonal and naturalist. Therefore, alternative assessment will help the teachers to improve the student's creative thinking skills and it also boosts the students' motivation in learning.

## Conclusion

According to Vinas and Perez (2015) the use of alternative assessment in the learning process can help improve students' motivation and positive attitude towards the classes or subject that they learn. Moreover, some of the alternative assessment requires students to do collaborative activities, giving opportunity for the students to help each other and students who have difficulties will improve their academic results. The findings from Watt (2005) indicate that there are limitations on traditional assessments which relates on the concerns to the needs of the alternative assessment method in assessing students academic achievement. According to Janisch, Liu and Akrofi (2007), alternative assessment provides students an opportunity to gain hands-on learning experiences. As stated by Roberson (2015) the implementation of alternative assessment is able to lower the number of absentees and disciplinary issues among students. This is because alternative assessment can help increase the students' interest in their studies.

Multiple intelligences are important as each of the intelligences will direct the individual toward their career path and their intellectual abilities (Morgan & Harry, 1992). Students' multiple intelligence depends on biological endowment, personal life history, cultural and historical background (Nuri et. al, 2014). The aim of education should be to develop cognitive abilities of children to help them be successful in life (Vernon & Antonia, 2013). Hence, the strong correlation between Multiple Intelligence and alternative assessment of the teachers indicates that teachers who have Multiple Intelligences will frequently apply the alternative assessment techniques during the teaching and learning process in classroom.

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# Innovative Assessment Strategies for Student Projects

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## Abstract

Assessment is an integral part of any academic practice model and by no means the easiest. Assessment can change the student's perception and attitudes towards learning and consequently the way in which they manage their curricular expectations and career development. Learning outcomes indicate what is expected of students, help staff plan the delivery and provide students and employers with descriptors of the levels of knowledge and skills achieved. Through an Innovative assessment model which embeds employability and personality scales we measure a student's learning outcomes for a module of study. The challenge of any assessment method is to measure with rigour and fairness the level to which learning outcomes have been met. This communicates to students and employers, a sound mechanism for comparison of the quality of the educational experience. The research aimed to design and implement an assessment model that recognises individual contributions of students within a team based on the work of the International Personality Item Pool (IPIP). The question being asked in this research was: "can the work of the International Personality Item Pool which measures Personality and Other Individual Differences be used to express an innovative, rigorous and fair assessment process of individuals and teamwork?" The methodology proposed recognises, measures and rewards the contributions of individuals, teams and teamwork efforts associated with engineering and technology business tasks. The research showed that through empirical and scientific methods that the proposed principles are a sound representation of an innovative assessment model that is rigorous and fair as it is based on scientifically proven constructs by the scientific community.

**Keywords:** Employability, Career Development, Lifelong Learning, Critical Thinking, The Apprentice, Student Confidence

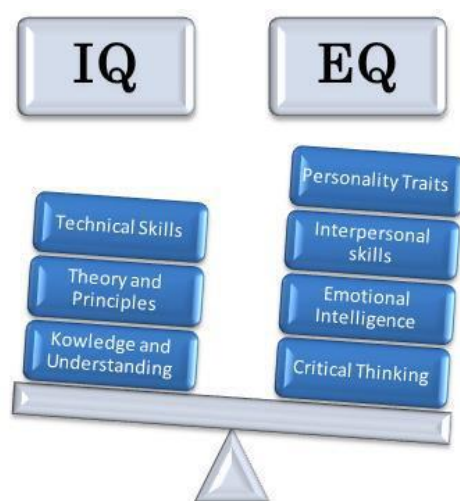
## Introduction

Assessments, from a student's perception, affect them in their learning life, and yet most of the students agree that they are in the dark on what goes in the minds of their examiners or assessors. As such, not having total understanding on the assessment process may affect students perception and attitudes towards the learning process, and in some cases, affect the way in which they manage their curricular expectation and career development. Many Higher Education Institutions (HEI) are gearing towards Outcome Based Education, (Memon, et al., 2009) (Quality Assurance Agency , 2000)

The learning outcomes philosophy used in Higher Education involves the specification of academic programmes that are compliant with, subject benchmarks, and the local HEI policies. At a lower level, learning outcomes indicate what is expected of students, help staff

plan the delivery and provide students and employers with descriptors of the levels of knowledge and skills achieved. The challenge of any assessment method is to measure with rigour and fairness the level to which learning outcomes have been met. This will help students and employers to reach a common understanding on the assessment mechanism for comparison of the quality of the educational experience.

The assessment of career development and employability is also about choosing appropriate assessment techniques that will engage and motivate the students in the learning activity. However this process is of a very challenging nature (Knight, 2008). The assessment of the hard skills (IQ) is a logical process which concentrates on evaluating ‘what to think’ to determine if a student has acquired the necessary knowledge structures of a subject discipline. The idea of the assessment is illustrated in Figure 1.



**Figure 1:** Employability and soft skills vs hard skills

The Career Development and Employability (CDE) framework is an innovative academic practice concept for teaching, learning and assessment of undergraduate students’ career development and employability skills within a unit of study, (Ponciano & Koh, 2016). The rigorous assessment of CDE is also determined by the demonstration of soft skills such as those defined by the emotional intelligence quotient, for example, critical thinking and interpersonal skills. These skills fit into the ‘how to think’ category and are comprehensively more challenging to assess in a student.

This research works is conducted followed an innovative and motivational framework for the development of students’ CDE skills based on the reality TV show, The Apprentice. A rigorous and fair assessment model that recognises individual and team based contributions to teamwork, based on work of the International Personality Item Pool (IPIP), is presented. The research work carried out follows an action research philosophy with ethnographic and phenomenological components. Both the CDE framework and the IPIP based assessment model study are qualitatively and quantitatively evaluated from a sample of 58 participants in the context of the student experience. The validity of the methods in academic practice and

their substantial contribution is asserted to enhance the student experience by increasing student motivation and engagement as well as the open systems approach of the methods to fit with other academic subject disciplines

## Assessment and Feedback

Through an analytical process of staged selection we have contracted the index of 204 labels for 269 IPIP scales into 24 personality scales and catalogued them into three categories addressing areas of development required by current career development and employability criteria. The 24 personality scales and traits are shown in Figure 2. The personality scales selected describe accurately The Individual, The Team, and The Business Task categories in the context of teaching and learning Engineering and Technology undergraduates. For every personality scale used, the IPIP item descriptors were adapted to avoid duplicate descriptors and to reflect the application within the CDE themes through the model of The Apprentice. The descriptors of each scale are presented in terms of the positive and negative behaviour patterns by a variable number of items.

The IPIP is a scientific collaboration for the development of advanced measures of personality and other individual differences (Goldberg, et al., 2010). Two scales, “+keyed” and “-keyed” are used, where items ‘+keyed’ describe positive patterns of behaviour present in the category whereas items of ‘-keyed’ describe negative patterns of behaviour or that the behaviour is not present in the personality. For example, the Conscientiousness scale used to define individual behaviour is described synoptically below.

**Table 1:** IPIP Scale for Conscientiousness

+ keyed	– keyed
Accomplish my work on time.	Neglect my duties.
Do things according to a plan.	Put off unpleasant tasks.
	Am often late to work.

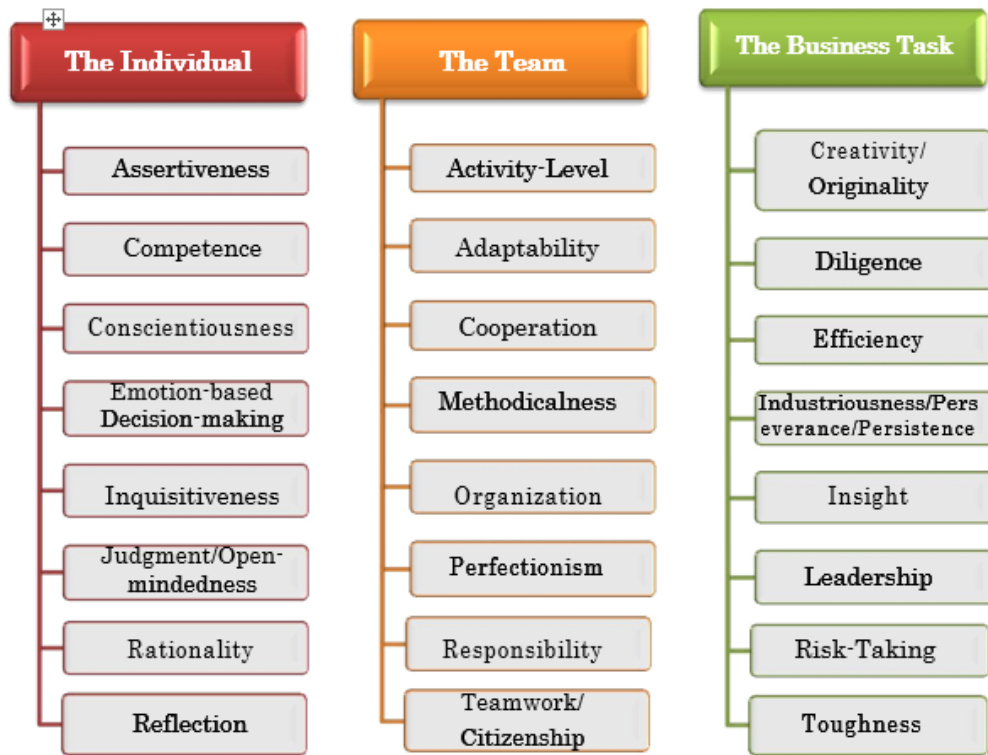


Figure 2 – CDE Personality Categories and Traits

### The Likert's Scale and CDE Points

The assessment process for each personality scale is via in-class observation between the individuals within a team and the facilitators. A group of three facilitators observe the identified behaviours according to the defined personality scales during the observation stages of every business task. Each facilitator specialises in a single CDE category throughout the Business Tasks.

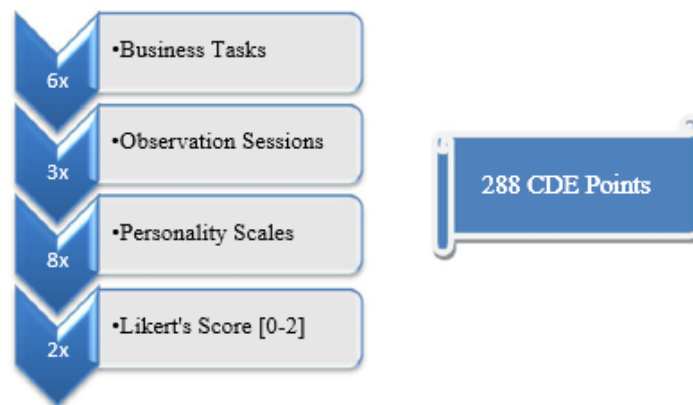
During the Observation Sessions the facilitator, who is knowledgeable about the items that define the positive and negative tendencies of the personality scales assesses the level of propensity of the Individual, the Team or the Business Task towards a single rating on a Likert's style scale for every personality scale.

The assessment of the Business Tasks uses a scale from -2 to 2 where:

- 2 = strongly disagree to the concept
- 1 = somewhat disagree to the concept
- 0 = undecided, behaviour not evidenced
- 1 = somewhat agree to the concept
- 2 = strongly agree to the concept

The Likert's scores are converted into points for every Individual, Team and Business Task and designated as Career Development and Employability points. The maximum CDE points

accrued by the three personality categories that describe the Individual, the Team and the Business Task are as follows:



**Figure 3:** Method of calculating CDE points

There are 288 CDE points for each of the category; hence, totalling 288 CDE points for Individual, Team and Business Task, a total of 864 CDE points will be collected.

#### Assessing the Individual

Week upon week individuals can/should improve their scores by reflecting on their behaviours of work and modifying these as appropriate to their personal and professional development. For example students can improve “reflection” by showing the ‘+keyed’ traits: *“I can demonstrate that I reconsider previous actions, events and decisions or that I am careful to collect people’s opinions”*. The CDE points assigned to the individual category are unique for each individual in accordance with the IPIP scales used.

#### Assessing the Team

The personality scales used to measure the behaviour of the team are reflected as group CDE points. This means that all individuals will score the same CDE points against a particular item on the Team personality scale. We have assumed, as the team is a body of individuals that share the same goals that we can treat it as an individual body and thus talk about its personality and derivative behaviours.

The total scores associated with this category and with the Business Task category are added to show the weekly team performance and to stimulate competitiveness between teams.

#### Assessing the Business Task

The assessment of a Business Tasks is identical to that explained for both the individual and the team but assigned on a team basis for every IPIP scale defined as part of the Business

Task. As there is no such thing as the personality of the Business Task, what the facilitator is looking for is the levels of success in the planning and execution of the user requirements.

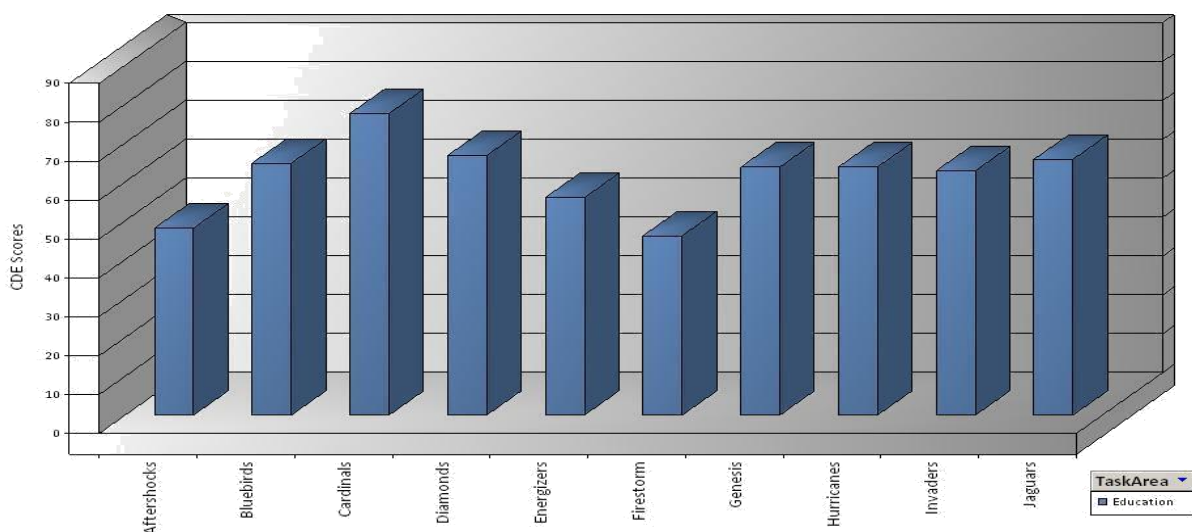
The personality scales have been carefully chosen to represent items that are relevant in assessing a business task. In a nutshell, as the Business Tasks are planned and executed by teams of individuals and we can talk about the personality of an individual, transitively we infer that the personality scales can be used to analyse the success of the planning and execution of a business task.

#### Feedback to Students

In CDE student feedback is designed to encourage participation and the development of technical Engineering and Technology knowledge and skills. The Observation Sessions via the academic facilitator is significant examples of the importance of feedback in CDE. CDE also provides the student with qualitative and quantitative written feedback from a variety of sources, which includes the facilitator.

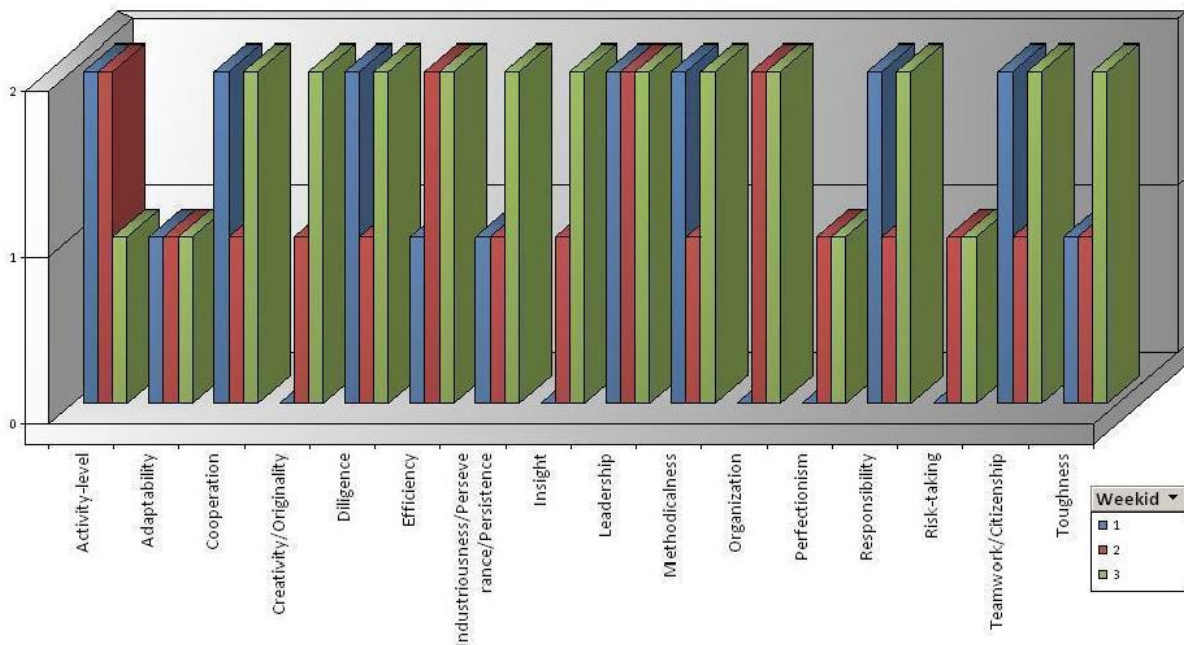
Every piece of summative work receives written feedback relating to the different marking criteria and a mark in a percentage scale. The Pitch and Boardroom guests' reports are available to all students for consultation. Individuals and Teams are advised to read and reflect on this feedback and to use it throughout the development of subsequent Business Tasks and in the successful individual achievement of the Personal Development Plans (PDP) and critical review assessment.

A final and original way in which the CDE framework provides students with prompt and weekly feedback which stimulates competitiveness through their studies is via the dissemination of charts and reports of indicative performance for individuals and teams. The graphical feedback provided at the end of every Observation Session is based on the CDE personality scores achieved by Individuals, Teams and the work on the Business Task. At the end of every task students are also sent their personality scales individual feedback. Figure 4 shows an example of the CDE scores achieved by every team at the end of a three week observation cycle. This information stimulates team motivation and competitiveness as teams try to win the task prize.



**Figure 4:** Team Competitiveness chart

The breakdown of the composite CDE score for a particular task is provided against all Team and Business Task personality scales as indicated in Figure 5. This chart provides the student with valuable weekly information of the personality scales scores defined for both the team and the business task. At the end of every week students should reflect on their scores and remind themselves of the personality scale definition in order to improve their scores.



**Figure 5:** Education Task IPIP CDE Bluebirds Team Scores

At the end of every task students receive an individual breakdown of their individual personality scales scores. This indicates to the individual student the areas of personality which they must develop over the course of the study. This information is to be reviewed in conjunction with the definitions of the personality scales.

## Conclusion

This study has presented an innovative scheme for the assessment of students which does not focus directly on the outcomes of their work from a course perspective but instead highlights an approach which is based on the set of attitudes towards developing professional work practices.

The study has revealed that the proposed CDE system of assessment can be defined in an open way to other subject areas however full attention needs to be paid by the academic in ensuring that the students are aware that there are not prescribed marking criteria associated with project work but instead a definition of the behaviours of the individual, and a team which will control the quality of the work completed.

The proposed assessment strategies were described by students as original and commended on the fact that feedback was given at the end of every week of work and in a visual way. The prompt feedback given by this assessment scheme allowed students to make noticeable improvements to their marks on subsequent project assessments within the module of study as they better understood the necessary attributes of employability and project work within a team.

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# **Pedagogical Practices of Tutors at DMMMSU Open University System**

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## **Abstract**

Pedagogical practices support student's learning. This is in line with the dynamic teaching pedagogy that accounts student's professional growth and career advancement. In so doing, classroom teaching models are introduced to spearhead the needs of the students along their way to a higher career choice. Quality education rests primarily on the ability of the teachers to deliver quality instructional performance. It has been said that the best instructional medium inside the classroom is the teacher. It is imperative then that the teacher is equipped with an outstanding or excellent personal facility and teaching attributes that ensure effective teaching and learning outcomes that contribute immensely to the attainment of quality education. The study assessed the pedagogical practices of tutors at DMMMSU Open University System. The descriptive method was used in this study. The primordial instrument used in gathering data was the two-part guide questionnaire.

Data were collected, tallied and analyzed in accordance with the study. The quantitative data were analyzed using Average Mean under the Microsoft Analysis Tool Pack. In light of the findings of the study, the pedagogical practices of tutors are globally competitive and highly recommended for quality distance learning education at its finest; The stakeholders and the clientele are key components towards quality distance learning education; and the formulation of an enhancement program contributes to the sustainability of the best instructional practices of DMMMSU Open University System.

**Keywords:** Pedagogical Practices, Tutor, Open University System.

## **Introduction**

Pedagogical practices support student's learning. This is in line with the dynamic teaching pedagogy that accounts student's professional growth and career advancement. In so doing, classroom teaching models are introduced to spearhead the needs of the students along their way to a higher career choice.

Quality education rests primarily on the ability of the teachers to deliver quality instructional performance. It has been said that the best instructional medium inside the classroom is the teacher. It is imperative then that the teacher is equipped with an outstanding or excellent personal facility and teaching attributes that ensure effective teaching and learning outcomes that contribute immensely to the attainment of quality education.

With the mounting competition among higher educational institutions, one of the keys to their survival is setting the standard for instructional and local standards. Teachers take the vanguard role for this crusade in ensuring quality instructions. It is imperative however, that teachers do not only display good instructional practices but the best instructional practices.

The competency of teachers then to deliver the best instructional practices becomes the competitive advantage of the school in surviving the competition for instructional service delivery and in meeting the challenges reforms.

Best instructional practices are specific teaching methods that guide interaction in the classroom. These effective practices have been identified through research on student learning. Best instructional practices are like vehicles used by teachers to efficiently move students forward in their learning (<http://tspnva.org>)

According to Quiros as cited by Bilbao et al.(2006) the best teachers in the classroom are world class, being world class does not mean going internally and showing their best out there. Being world class in passion and commitment to the teaching profession, being world class is giving the best to teach. Being world class starts right inside the classroom.

DMMMSU-Open University System (OUS) is one of the academic units of Don Mariano Marcos Memorial State University recognized as an operating unit of the University directly under the Office of the University President pursuant to BOR Resolution No. 98-024. It aims to provide distance education to people who no access to schools, colleges, and universities or those who, for one reason or another, cannot profit from the formal education system. As such, it offers formal, and non-formal distance education programs in agriculture, science, education, business education, and development administration that will promote access, quality, effective and efficient education ([www.dmmmsu.edu.ph](http://www.dmmmsu.edu.ph)).

Anent thereto, the modes of learning include group-paced, individualized, and on-line services. Tutors are selected based from the qualifications set forth by the University to the extent that all of them are vertically aligned and qualified as we as competent to teach the subjects being offered.

However, becoming the best teacher in the classroom and manifest the best instructional practices are easier than done. Based from the tutor's evaluation (Second Semester, School Year 2014-12015), it was revealed that much is expected for the delivery of instructional practices in view of the categorical commentaries of the students relative to the performance of the tutors although arguably half-truths may ignite curiosity and warrant further investigation. Stated differently, DMMMSU Open University System expects its tutors to be delivering an outstanding or excellent extent of implementation in the realm of a globally competitive and a world class academe.

## **Purpose of the Study**

This study aimed to determine the pedagogical practices of tutors of DMMMSU Open University System. Specifically, it sought to answer the following questions:

1. What is the extent of implementation of the instructional practices of the tutors of DMMMSU Open University System along:
  - a. teacher's personal attributes;
  - b. instructional efficiency; and
  - c. time productivity?
2. Are there significant differences in the extent of implementation of the instructional practices along the identified dimensions?

3. What are the pedagogical practices of the tutors along the identified dimensions?

## Methodology

The descriptive method was used in this study. A descriptive research states that the focus of the study is the present condition. The purpose is to find new truth. The truth may have many different forms such as increased quantity of knowledge, a new generalization or new law, increased insights into factors which are operating, the discovery of new casual relationship, a more accurate formulation of the problem to be solved and many others (Fraenkel and Wallen, 2006).

Anent thereto, information relative to the study to be taken from DMMMSU-Open University System were gathered, reviewed and analyzed.

A questionnaire was prepared by the researchers to determine the extent of implementation was used to gather additional data.

Respondents included the three-hundred ten (310) students of DMMMSU Open University System who were enrolled in grouped paced learning within the second semester (SY 2014-2015) and twenty-nine (29) tutors under bachelor's program/s with a total of three-hundred thirty-nine (339). Unfortunately, only two-hundred eighty-five (285) students and twenty-six (26) tutors responses were collected considering the fact that some of the students were absent during the floating of questionnaires. Since the total number of respondents was less than 500, total enumeration was utilized. The questionnaire that was utilized was prepared by the researcher. The statistical tools used were: weighted mean and t-test. Data categorization was based on the institutional standard of rating the tutors as prescribed hence, the following scale:

Point Value	Statistical Range	Descriptive Equivalent
5	4.20 – 5.00	Excellent
4	3.40 – 4.19	Very Good
3	2.60 – 3.39	Satisfactory
2	1.80 – 2.59	Fair
1	1.00 – 1.79	Poor

## Results and Discussions

### Implementation of Pedagogical Practices of DOUS

#### Teacher's Personal Attributes

Table 2 reflects the teacher's personal attributes of the respondents of DMMMSU-Open University System.

It can be gleaned from the table that teacher's personal attributes obtained a grand mean of 4.45 described as excellent. This would only mean that the personal characteristics of teachers of the respondents contributed to the excellent performance and high profound quality instruction.

**Table 2:** Teacher's Personal Attributes

<b>Indicators</b>	<b>Tutors</b>	<b>Students</b>	<b>Mean</b>	<b>DE</b>
The Tutor. . .				
1. Observes proper teaching decorum.	4.52	4.40	4.46	E
2. Delivers the lesson in a well-modulated voice.	4.48	4.47	4.48	E
3. Uses multi-lingual education as a medium of instruction.	4.40	4.34	4.37	E
4. Treats students without any discrimination on account of gender, status, or religious affiliation.	4.48	4.56	4.52	E
5. Does not embarrass students and considers their individual differences.	4.20	4.53	4.36	E
6. Always approachable and compassionate to the needs of students.	4.40	4.60	4.50	E
<b>Grand Mean</b>	<b>4.41</b>	<b>4.48</b>	<b>4.45</b>	<b>E</b>

Legend: DE – Descriptive Equivalent      E - Excellent

Taking it singly, treating the students without any discrimination on account of gender, status, or religious affiliation garnered the highest with a mean rating of 4.52 described as Excellent. This implies that students of DOUS are treated with high regard of fairness, equality and sound discretion in the learning environment.

In the study of Ladson-Billings (2005), good instructional practices include the following: treating all students in a fair and equitable manner, involving the whole class and does not just call on any particular group of students based on gender, race, or ethnicity, and offers both shy and extroverted students opportunities to excel in the classroom. Maintaining an equitable and fair teaching relationship with all students is a key practice to discourage any unnecessary competition in the classroom. This sometimes involves the teacher-student role.

On the other hand, does not embarrass students and considers their individual differences obtained the lowest with a mean rating of 4.36 described as Excellent. Apparently, this indicates high respect untoward individual capacities taking into consideration the needs and convenience in harmonious development of the student.

According to Park (2003), one good instructional practice is to encourage students be engaged in and responsible for their own learning. She/he must challenge and motivate students to achieve at higher levels. The teacher communicates to all students their progress so they know where they stand grade-wise at any moment of the semester. When there is a guest speaker, the instructor requires students to develop questions in advance. As such, the students go to the white board to demonstrate their knowledge in math and accounting class.

### **Instructional Efficiency**

Table 3 shows the instructional efficiency of the respondents of DMMMSU-Open University System. It has an overall mean of 4.47 described as Excellent.

Chief among these is the giving of grades according to the academic requirements prescribed by the academe obtained the highest mean of 4.60 described as Excellent. This

implies high regard of evaluation as to academic requirements of the students with utmost equality and good faith according to the standards set forth by the academe.

This is supported by the study of Schraw (2011), which states that students need to be challenged academically and they should be expected to meet high standards, because the teacher expects a high quality of work from them, they may not produce a high quality of work. Part of the process requires the teacher to provide excellent feedback, and give very specific comments so that students can improve their work.

On the contrary, explaining the objectives and expectations of the course garnered the lowest mean of 4.16 described as Very Good. This implies that objectives and expectations should be given priority in the outset of formal and informal education, to introduce the framework of the course and sustain its goals worthwhile. Moreover, information and communication technology is also essential to sustain its integration the learning objectives.

In the study conducted by Parkes and Harris (2009), one of the best practices along instruction is providing an overview of what the class will cover through the class learning objectives. Learning objectives let students know the skills and knowledge that will be taught in a particular class. Think of them as a road map to follow. This is typically accomplished by the instructor distributing a clearly written syllabus to students. A well-written course syllabus is a very effective learning tool, that helps students prepare for the class, locates the resources that are available to them; understand the goals of the class, and the philosophy of the instructor.

**Table 3:** Instructional Efficiency

Indicators	Tutors	Students	Mean	DE
The Tutor. . .				
1. Introduces the Vision-Mission-Goals and Objectives (VMGO) of the DOUS.	4.48	4.37	4.43	E
2. Highlights the framework/parts/synopsis of the module according to the course subject.	4.56	4.30	4.43	E
3. Explains the objectives and expectations of the course.	4.18	4.14	4.16	VG
4. Fosters a learning environment that suits				
5. Encourages a motivating and democratic classroom atmosphere during face to face meetings.	4.24	4.53	4.39	E
6. Encourages students to dwell more on their weaknesses and to study more about the subject.	4.16	4.18	4.17	VG
7. Employs appropriate teaching techniques and other related activities (like lecture, symposium, seminar, group discussion, and collaborative learning).	4.45	4.43	4.44	E
8. Has broad mastery of the subject matter.	4.57	4.43	4.50	E
9. Gives synthesis/summary/evaluation after every end of the face to face meeting.	4.69	4.45	4.57	E
10. Fair in giving grades according to the				

academic requirements prescribed by the academe.	4.72	4.47	4.60	E
<b>Grand Mean</b>	<b>3.63</b>	<b>4.01</b>	<b>3.82</b>	<b>VG</b>
Legend: DE – Descriptive Equivalent	E – Excellent	VG – Very Good		

### Time Productivity

Table 4 shows the time productivity as perceived by the respondents. It can be gleaned from the table that the over-all mean is 4.58 which is described as Excellent. Among the indicators, not incurring under time obtained the highest mean of 4.72 which is described as Excellent. This implies that time is really of the essence so as to sustain the learning satisfaction of the students according to the lesson prepared by the tutor under the module assigned.

On the other hand, starting the classes on time obtained the lowest with a mean of 4.46 albeit described as excellent. This would only mean the tutors are well-prepared as to their modular lessons giving their fullest interest to teach for the welfare students.

**Table 4:** Time Productivity

Indicators	Tutors	Students	Mean	DE
The Tutor. . .				
1. Meets the students according to the assigned module.	4.82	4.45	4.63	E
2. Starts the classes on time.	4.56	4.36	4.46	E
3. Uses the time productively.	4.65	4.41	4.53	E
4. Maximizes the time according to the scheduled activity.	4.72	4.43	4.58	E
5. Does not incur under time.	4.97	4.47	4.72	E
<b>Grand Mean</b>	4.74	4.42	4.58	E

Legend: DE – Descriptive Equivalent      E - Excellent

### Summary Table on the Pedagogical Practices

Table 5 shows the summary table on the pedagogical practices of tutors. Among the indicators below, time productivity obtained the highest with a mean of 4.58 described as excellent while instructional efficiency obtained the lowest with a mean rating of 3.82 described as Very Good.

**Table 5:** Summary Table

Indicators	Tutors	Students	Mean	DE
A. Teacher's Personal Attributes	4.41	4.48	4.45	E
B. Instructional Efficiency	3.63	4.01	3.82	VG
C. Time Productivity	4.74	4.42	4.58	E
<b>Grand Mean</b>	4.26	4.30	4.28	E

Legend: DE – Descriptive Equivalent      E – Excellent      VG – Very Good

Comparative Analysis between the Pedagogical Practices as perceived by the Respondents

Table 6 shows the differences in the instructional practices as perceived by the 2 groups of respondents as compared.

The table also shows that the weighted means are 4.26 for tutors, 4.30 for students. The computed F-value stood at 0.0026 vis-à-vis the p-value of 0.96 which means that there is no significant difference in the respondents' perceptions as to the extent of instructional practices of the tutors of DMMMSU Open University System.

The two groups of respondents fall squarely as compared that their perceptions to that extent are excellent. These would only mean that all of them are key factors in providing the best instructional practices of the academe in line with the schools' goals, mission and vision. An enhancement program is indeed vital to the sustainability of these effective instructional practices.

Table 6. Comparative Analysis between the Instructional Practices as perceived by the Respondents

Group	Mean	Standard Deviation	F-value	p-value
Tutors	4.26	2.93		
Students	4.30	3.42		
			<b>0.0026*</b>	0.96

\*not significant

### **Pedagogical Practices of Tutors**

#### **Teacher's Personal Attributes through Total Human Formation**

Tutors of the institution reflect high regard of character and values education in the learning environment notwithstanding their field of specializations. It is but just proper that as tutors of the academe, they are not merely to teach but also to transform human resources into productive, self-reliant citizens, and responsible leaders in the community.

#### **Instructional Efficiency through Quality Instruction**

Since the mission of the university is to provide relevant quality instruction, research, and extension, it is essential that teaching pedagogy is effective and efficient. This is evident among the tutors of DMMMSU-Open University System inculcating outcomes-based education in the existing curriculum integrating the current trends in educational technology.

#### **Time Productivity through Pedagogical Planning & Development**

Time is of the essence. Tutors prepare lessons according to their respective lesson plan as what transpired in the syllabus or even in the curriculum. Since, the academic unit is a distance education, modules are prepared as the main learning materials vis-à-vis the existing curriculum. In fact, the university has an operational and academic plan that geared towards

the direction as well as the implementation of the series of activities under instruction for the new school year.

## **Pedagogical Media**

### **A. Main Media**

The institution uses *Course Modules/printed materials* which serve as the main learning materials. It contains the discussions of lessons/topics, course descriptions, course objectives, study methods, instructions on how to use the modules, self-evaluation every lesson, learning exercises and reports, together with summative tests for each module.

### **B. Supplementary Media**

The institution provides Tutorials/Consultations to individualized learners at the DMMMSU Learning Centers. The purpose of tutorials is to expand student's knowledge and understanding of the course content, which they study on their own. The unit utilizes communication tools such as fax, telephone, mobile phone for short messaging services and internet for electronic mails.

### **C. Student Support Services**

This includes: scholarship grants, student loan assistance, student's awards, guidance and counseling, accommodation services, student body organization, library and IT-related services, and student's publication.

### **D. Online Services**

This includes online learning using the learning management system under [www.edu.2.0](http://www.edu.2.0) since the unit is a distance learning institution wherein students exchange ideas, submit modular assignments/exercises, take examinations with their respective tutor/s through online. Close coordination is essential between the tutor and the student to monitor/supervise the activities of the latter.

## **Summary**

This study entitled "Pedagogical Practices of Tutors at DMMMSU Open University System" utilized the descriptive research design. Through the set of questionnaire relative to the implementation of instructional practices in the aforementioned study by which it was assessed.

Specifically, this study sought to answer on the following:

1. Extent of implementation of the pedagogical practices of the tutors of DMMMSU Open University System along:
  - a. teacher's personal attributes;
  - b. instructional efficiency; and
  - c. time productivity
2. Significant differences in the extent of implementation of the pedagogical practices of the tutors when they are grouped.

### 3. The pedagogical practices of the tutors along the identified dimensions.

The study assessed the pedagogical practices of tutors at DMMMSU Open University System. The respondents of this study composed of two (2) sets (1) Tutor and (2) Students. They were considered as respondents in view of their awareness and observation as regards the subject matter of the research. Since the number of respondents was less than five hundred (500), the total enumeration was utilized. Data were collected, tallied and analyzed in accordance with the study. Mean values and t-test were the statistical tools used in the computation of the gathered data.

The data gathered, analyzed, and interpreted came out with the following salient findings:

1. The extent of implementation of the pedagogical practices of tutors along the identified dimensions was excellent.
2. There was no significant differences of the pedagogical practices as perceived by the respondents; and
3. The pedagogical practices of DMMMSU Open University System include: total human formation, quality instruction, pedagogical planning and development, as well as pedagogical media.

## Conclusion

Based on the findings of the study, the following conclusions were made:

1. The pedagogical practices of tutors are globally competitive and highly recommended for quality distance learning education at its finest.
2. The stakeholders and the clientele are key components towards quality distance learning education.
3. The pedagogical practices embrace world class standards in the realm of distance learning.

## Recommendations

Based on the findings of this study, the following are highly recommended:

1. The University should maintain the distinct characteristic of DOUS as the only distance learning of best instructional practices worldwide.
2. The University should provide more innovative instructional designs to cater the needs of the clientele.
3. The University should ensure employment opportunities among its clientele both domestic and abroad in the springboard of a world class open university system.
4. The tutors should sustain the best pedagogical practices along with the ASEAN integration encouraging distance learning towards global competitiveness.

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# Faculty-Student Engagements: Dimensional Aspirants or Deterrents

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## Abstract

Workforce engagement is a key organizational factor with a set of determinants for organizational excellence for profit or nonprofit businesses that includes healthcare and educational establishments. The “engagement” hype has spilled over into the HEIs where student engagement is claimed as a key factor for student success, and is becoming a potentially important measure of student success. While it is recognized that student engagement is important, most HEIs have forgotten that it takes “two to tango”. The premise underlying this paper is that for successful faculty-student engagement, one would need to look at both sides of the aspiring or deterring determinants equation of student and faculty engagements. These determinants represent two sides of the “faculty-student tango engagement” equation, of which this paper aims to explore. It will look at the two main determining dimensions of environmental factors and behavioral factors of both faculty and students. In the environmental dimension, the normal determinants are the organizational factors, work psychological climate and loyalty enhancers. The behavioral dimension will explore the psychological and emotive behavior together with personal and beliefs disposition. In determining the aspirants or deterrents dimensions, it aims at identifying key fundamentals of a holistic framework for faculty-student engagement determinants, when clarified can potentially strengthen the engagement foundation of institution success underlying student success.

**Keywords:** Student Engagement, Faculty Engagement, Student Success, Faculty-Student Engagement Model

## Introduction

HEIs have historically been faculty centered and only in the past decades have been making efforts to be more student-centered. This is supposedly to be accomplished through a wide arrays of key teaching and learning approaches like experiential and experience learning, outcome-based learning, case-based, project based, flipped class room and others, all with a singular aim of involving the student as the center of focus of development. Building on this, is a key fundamental of engaging the student, and these “student engagement” studies are still based on the basic business and psychological studies done in the business sector.

In trying to disentangle the “student engagement” diaspora, one assumes that understanding the student and providing the necessary engagement mechanisms will serve the student-centric goal in the HEI. Unfortunately, both the student and faculty are involved in an engaged set of environment within the school and social as influenced by personal and psychological backgrounds. Fundamentally, it takes “two to tango” for the student-faculty

engagement to work and this takes place within the plethora of school given environmental and operational factors, both parties' consensual agreement and this agreement is affected by another set of multifarious social, self and school's needs, personal and psychological variables. These underscore the faculty-student relationship which is a bi-relational engagement equation as opposed to a uni-directional engagement that flows from the faculty to the student and expects that the student to want to be engaged.

To understand this bi-relational faculty-student engagement agenda, this paper has two aims of (1) reviewing basic concepts and studies in "engagement"; (2) based on this review, to apply it to develop and design a student-faculty engagement framework to better understand the dilemma facing the faculty-student engagement success.

## **Review on "Engagement" Literature**

There are various and conflicting definitions of employee engagement in the psychological literature. Some definitions claim that employee engagement is something that is produced by aspects in the workplace (McCashland, 1999; Miles, 2001 and Harter, et al 2003). These key workplace behaviors can include beliefs in the organization, desire to work to make things better, understanding of the business context and the „bigger picture“, being respectful of and helpful to colleagues, willingness to „go the extra mile“ and keeping up to date with developments in the field (Robinson, et al., 2004) or involvement in decisions (Purcell, et al., 2003). All these are based on perception, where Buchanan and Huczynski, (2004:215) defined this perception as "the dynamic psychological process responsible for attending to, organizing and interpreting sensory data" which is different from individual to individual as each individual receives and interprets information differently based on their personal frame of reference (Towers and Perrin, 2003).

Furthermore others assert that it is something that the individual brings to the workplace (Harter et al 2002 and Goddard 1999). Extraneous variables such as individual differences or as noted by Harter et. al., (2002) that "the individual's involvement and satisfaction as well as enthusiasm for work" may not be trivial and could have significant effects (Ferguson, 2007) as employee engagement is related to emotional experiences and wellbeing (May, et al 2004 and Ferguson, 2007). This is supported by Saks (2006) and Roberts (2006) who noted that engagement is most closely associated with the existing construct of job involvement and flow. This is based on the social exchange theory where people make social decisions based on perceived costs and benefits (Cropanzano and Mitchell, 2005) and that the human being evaluate all social relationships to determine the benefits they will obtain out of such relationships (Homans, 1958; Blau, 1964; Ethugala, 2011 and Ologbo and Saudah, 2012).

Basically, according to the main streams of studies on "engagement", there are potentially 3 approaches of "engagement" as follows:

**Psychological approach** – According to Kahn (1990), engagement at work is the degree of: (1) cognitive (concerns employees' beliefs about the organization, its leaders and working conditions); (2) emotional (concerns how employees feel about each of those three factors and whether they have positive or negative attitudes toward the organization and its leaders); and (3) physical (concerns the physical energies exerted by individuals to accomplish their roles)

involvement in a work role, how much a worker puts into a job and work interactions, and the personal connections with work and co-workers which is basically conceptualization rather than operational (Kim et al., 2009a,b). Employees who exhibit engagement are physically involved in their tasks, are cognitively alert and attentive, and are emotionally connected to their work and to others in the work place (Ferrer, 2005).

**Burnout approach** – In the second approach, the “burnout approach” of Maslach and Leiter (1997) and Maslach et al., (2001) conceptualized engagement as the opposite or the positive antithesis to the three burnout dimensions of exhaustion, cynicism, and sense of inefficacy. Kahn’s (1990) and Maslach, et. al.’s (2001) models indicated the psychological conditions or antecedents that are necessary for engagement, but they do not fully explain why individuals will respond to these conditions with varying degrees of engagement.

**State of mind approach** – Schaufeli et al. (2002) provided a third approach for employee engagement, asserting that job engagement and burnout were independent states of mind inversely related to each other. They defined engagement as a positive, fulfilling, work related state of mind that is characterized by vigor, dedication, and absorption. Vigor refers to the feeling of physical energy, emotional strength, willingness to invest effort, and endurance of difficulties. Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge. Finally, absorption refers to the state of being so completely concentrated and highly engrossed in work that an employee feels time passes quickly and has difficulties detaching from work (Schaufeli et al., 2002).

Regardless of the approaches, Macey and Schneider (2015) found a commonality across the various definitions of employee engagement that reflect three things about the concept of engagement as :

1. Employee engagement is a desirable condition;
2. Employee engagement has an organizational purpose;
3. Employee engagement suggests absorption, dedication, passion, enthusiasm, focused effort and energy on the part of the employee.

## **How Engagement Works**

Employee engagement is the emotional commitment the employee has to the organization and its goals when they use discretionary effort that actually care about their work and their company and not work just for a paycheck, or just for the next promotion, but work on behalf of the organization’s goals which represents activation on the part of the employee, the willingness to expend his or her discretionary effort to help the employer. Employee engagement does not mean employee happiness as someone who is happy might not be productive or working hard or contributing towards organization accomplishment. Employee engagement does not mean employee satisfaction, as s/he might be compliant to regulations and not go the “extra mile” and is easily dissuaded with higher offers. This basically supports the idea that engagement is an emotional and intellectual commitment to the organization (Baumruk, 2004; Richman, 2006 and Shaw, 2005) or the amount of discretionary effort exhibited by employees in their job (Frank et al 2004).

Kevin Kruse (2012) stated “Engaged Employees lead to... higher service levels, quality, and productivity, which leads to... higher customer satisfaction, which leads to... increased sales (repeat business and referrals), which leads to... higher levels of profit, which leads to... higher shareholder returns (i.e., stock price)”. The Gallup Organization (2004) found critical links between employee engagement, customer loyalty, business growth and profitability. In 2005, a survey conducted in Thailand revealed only 12 per cent of Thailand’s employee population are „engaged“, 82 per cent are „actively disengaged“ and 6 per cent disengaged. Similar Gallup studies have found the levels of engagement in Australia, China, Japan, New Zealand and Singapore to be 18 per cent, 12 per cent, 9 per cent, 17 per cent and 9 per cent respectively (Gallup 2004).

As demonstrated in the Hewitt Associates’ research, engagement of the workforce is important, as it showed that companies with an engaged workforce posted shareholder returns 19 times higher than the total stock market index in 2009 but unfortunately 46% of the surveyed organizations have seen a decline in employee engagement since 2009 (Hewitt Associates, 2010). In addition, the ASTD/i4cp Learning and Engagement Study 2007 (ASTD, 2008) found that about two-thirds of respondents said that the quality of learning and training opportunities positively influences engagement in their organizations; 54% said the sheer breadth of such opportunities boosts engagement; and, “career development opportunities” were cited by 76% of respondents as driving engagement to a high or very high extent. This was supported by Schweyer’s research (2009) which stated that “Disengaged employees” cost U.S. employers up to \$350 billion annually and as many as 84% of U.S.-based employees plan to look for new jobs in 2011 (Manpower, 2010). Categorically, engaged employees put passion into their work, know and do what is expected of them and advocate their company to others. The second category is being responsive to engagement where employees put time, but not necessarily passion into their work. They are satisfied but are unclear about the organization’s vision, are not likely to talk about their organization to others. In the last category of the disengaged, they will talk to others, but the conversations may be negative and may undermine others’ efforts rather than concentrate on their own work. This would mean that the engagement is a combination of workforce loyalty (comprised of overall satisfaction with organization, to others and plan to continue working with organization) and workforce contribution (comprised of willingness to go the extra mile and willingness to recommend organization) (Inforsurf, n.a.).

Engagement is the extent to which employees commit to something or someone in their organization and how hard they work and how long they stay as a result of that commitment, This commitment has two main component of: (1) Rational Commitment which is the extent to which employees believe that managers, teams, or organizations are in their self-interest (financial, developmental, or professional) and (2) Emotional Commitment which is the extent to which employees value, enjoy and believe in their jobs, managers, teams, or organizations. These leads to the outputs of the (1) Discretionary Effort of the employee’s willingness to go “above and beyond” the call of duty, such as helping others with heavy workloads, volunteering for additional duties, and looking for ways to perform their jobs more effectively and (2) Intent to Stay which affects the employee’s desire to stay with the organization, based on whether they intend to look for a new job within a year, whether they frequently think of quitting, whether they are actively looking for a job or have begun to take tangible steps like placing phone calls or sending out résumés (Corporate Leadership Council, 2004). Both of these affect the employee’s performance and attrition. Based on the Corporate Leadership Council Engagement Model, a basic “10:6:2” Rule was established where: (1) every 10 percent improvement in commitment can increase an

employee's effort level by 6 percent and (2) every 6 percent improvement in effort can increase an employee's performance by 2 percent.

## **Discussion of Measurements of Engagement**

Engagement measure instruments includes People Metrics' Employee Engagement Index (EEI), Gallup's Employee Engagement (EE) and the Temkin Employee Engagement Index (TEEI), that do not offer clear definitions of engagement thus leading to their measurement construct reflecting more of the satisfaction with supervisors, co-workers, environment. Three basic approaches in the measures of engagement are:

**Work Engagement Scale** - This scale is based on the premise that Employee engagement can be conceptualized as either a trait, a state and a behavior, where the Utrecht Work Engagement Scale better reflects and provides measures of employee engagement that include such feelings as absorption, dedication, passion, enthusiasm, focused effort and energy on the part of the employee which are used in contemporary engagement literature and research (Schaufeli et al., 2002; Schaufeli and Bakker, 2003; Bakker and Schaufeli, 2008; Koyuncu et al., 2006; Karatepe and Demir, 2014).

**Affective Commitment Scale (ACS)** (Allen & Meyer, 1990; Meyer & Allen, 1997; Meyer, Allen, & Smith, 1993; Mowday, Steers, & Porter, 1979; Rhoades, Eisenberger, & Armeli, 2001) – This has been conceptualized as having a strong relation to employee engagement (Robinson, Perryman, & Hayday, 2004) where the employee's affective bond with their organization has been considered an important determinate of dedication, loyalty, and satisfaction (Rhoades, Eisenberger, & Armeli, 2001). These emphasizes the emotional connection employees have with their work and closely parallels the emotive qualities of engagement (Saks, 2006, CLC, 2006, Towers Perrin, 2003; 2007; Macey & Schneider 2008), including such conditions as meaningfulness and safety (Kahn, 1990).

**Psychological Climate Measure** – This is the employee's interpretation of their organizational setting in relation to their own well-being (Brown & Leigh, 1996 and James, James, & Ashe, 1990). In reality, the psychological climate is the lens employees use to understand their environment and "captures the meaningful psychological representations made by individuals relative to the structures, processes, and events that occur inside the organization" (O'Neil & Arendt, 2008, p. 355). It also "provides constraints on or opportunities for behaviors and attitudes in organizational settings" (Johns, 2001, p. 32).

## **Discussion of Drivers of Engagement**

In a white paper, Dale Carnegie identified people at the core of engagement driven by three main sets of drivers as: (1) Relationship with immediate supervisor (2) Belief in senior leadership (3) Pride in working for the company. In the MSW Research study, it was found that gender, ethnicity and work status (full/part time) do not emerge as critical variables of employee engagement, while more senior management (Senior VP+ level), people employed in a large corporation, those having a college education, earning a higher than average and those under the age of 30, or over 50 having some minor influence on engagement. Groups that are less engaged or disengaged with their organizations, in terms of demographic and organizational segments, are

those who are middle-aged employees (40-49 years old), highly educated, i.e., those with a post-graduate education, or lower-level income employees earning or newer employees with less than a year or client-facing and clerical staffers and those working in government, military, education and manufacturing sectors, with only about 29% fully engaged while there is a 26% disengaged. Basically, quoted by Andrew Carnegie, the bottom-line is “You must capture the heart of a supremely able man before his brain can do its best”.

The Dale Carnegie’s research (2012), “Emotional Drivers of Employee Engagement” showed that the level of engagement increases dramatically with the number of key positive emotions (Inspired, Enthusiastic, Empowered, Confident or Valued) that the employees feel. But three core negative emotions drive disengagement: feeling irritation, disinterest, and discomfort which is more important than positive emotions because negative emotions are more contagious and are more noticeable than positive ones that can impact co-workers and the organization as a whole and spread beyond the workplace to clients, potential clients and possible future hires. Employees who feel negative emotions are disengaged nearly ten times more than employees who feel positive emotions.

Some of the key drivers of Employee Engagement as identified and found in some of the workforce engagement studies and researches and discussed below include:

- employee welfare, empowerment, employee growth and interpersonal relationships (Mani, 2011)
- 10 Cs of Employee Engagement, namely Connect, Career, Clarity, Convey, Congratulate, Contribute, Control, Collaborate, Credibility & Confidence (Seijit and Crim 2006).
- Contributions, connections, growth and advancement (Wallace et al., 2006).
- Employee involvement and commitment (Britt et al., 2001)
- Leadership, relationships at work, total reward, recognition, work life balance and work itself (IES, 2004).
- Say, Stay and Strive (Hewitt, 2004).
- Job satisfaction, feeling valued and involved, equal opportunity, health and safety, length of service, communication and co-operation (IES, 2005)
- Rational – how well the employee understands roles/responsibilities; Emotional- how much passion employee can bring to work; and Motivational- how willing is the employee to invest discretionary effort to perform their role. (Towers Watson, 2009)
- Organizational culture and organizational communication (Bhatla, 2011).
- Brand alignment, recognition, people/HR practices, and organization reputation (Aon Hewitt Consulting, 2011a, „Trends in global employee engagement“)

The drivers above was also in support of another another major study in employee engagement as published by the Conference Board’s (2006), "Employee Engagement, A Review of Current Research and

Future Direction” which was based on 12 research studies of which four of the studies agreed on these eight key drivers of engagement as:

- Trust and integrity – how well managers communicate and 'walk the talk';
- Nature of the job – how mentally stimulating the day-to-day is;
- Line of sight between employee performance and company performance – understanding of employee towards their work that contributes to the company's performance;
- Career Growth opportunities – the future opportunities for growth;
- Pride about the company – degree of self-esteem the employee feel by being associated with their work;
- Coworkers/team members – degree of influence of one's level of engagement;
- Employee development – the company's effort to develop the employee's skills;
- Relationship with one's manager – degree of the employee value of his or her relationship with his or her manager.

## Synthesized Generic Factors Condition of Engagement

Based on the literature and discussion on engagement and its drivers above, all of which are similar in terms of the key drivers and rationale driving engagement and approaches to and measures of engagement, Table 1 shows a proposed synthesis of the “factors condition of engagement” of any typical organization, with these factors conditions applied within the context of the a higher education institution.

**Table 1:** Synthesized Generic Factors Conditions of Engagement

Generic Factors Condition of Engagement	Factors Condition of Faculty-Student Engagement
<ul style="list-style-type: none"> <li>• <b>Organization Factors:</b> <ul style="list-style-type: none"> <li>○ Quality of Product/Process</li> <li>○ Workplace environment</li> <li>○ Motivational Value Proposition</li> <li>○ Organization Profile</li> <li>○ Organizational Culture</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Organization Factors:</b> <ul style="list-style-type: none"> <li>○ Quality of Educational Product/Process</li> <li>○ School place environment</li> <li>○ Motivational Value Proposition</li> <li>○ Institutional Profile</li> <li>○ Institutional Culture</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• <b>Psychological-Relational Climate:</b> <ul style="list-style-type: none"> <li>○ Information and Communication</li> <li>○ Customer Orientation of the Management</li> <li>○ Managerial-Subordinate Relations and Support</li> <li>○ Involvement and Commitment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Psychological-Relational-Connect Climate:</b> <ul style="list-style-type: none"> <li>○ Information and Communication</li> <li>○ Stakeholder orientation of the Institution</li> <li>○ Institutional-Faculty(Student) Relations and Support</li> <li>○ Involvement and Commitment</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• <b>Personal Disposition:</b> <ul style="list-style-type: none"> <li>○ Personal Beliefs and Values</li> <li>○ Societal Norms</li> <li>○ Work life balance</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Personal Disposition:</b> <ul style="list-style-type: none"> <li>○ Personal Beliefs and Values</li> <li>○ Societal Norms</li> <li>○ Work life balance</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• <b>Emotive Disposition:</b> <ul style="list-style-type: none"> <li>○ Inspiration</li> <li>○ Passion</li> <li>○ Empowered</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Emotive Disposition (Faculty/Student):</b> <ul style="list-style-type: none"> <li>○ Inspiration</li> <li>○ Passion</li> <li>○ Empowered</li> </ul> </li> </ul>

From a generic organization perspective, the synthesized factors can be broadly categorized into 4 key categorical areas of factorial conditions of:

**1) Orgnaizational Factors Conditions** – This is from the main premise that key organizational factors which are more extrinsic in nature within the organization that creates an environment for other intinsic factors to work within. These can be typified by the degree of conducive organization environment of the work space, infrastructures and facilities, the organizational norms and culture, the organizational policies and procedures, organizational practices and players, all of which typify the collective actions towards organizational performance and pursuits of the organziational platform on which the play is staged as a whole by the internal players with the external stakeholders. What and how the players perform and how well they will perform or intend to perform is dependent on their perception of the motivational tangible and intangible cost/benefits of the value additions proposed to them by the organization. The performance is related to their perception of the type / nature of the organization culture that they and their peers subscribe to as the work and behaviroal norms within the organization. All of these lead to and affect how they perceive the quality of the processes affecting the final product or service quality. Basically, their peformance is affected by and relates to their perceptions of these key organizational factors conditions that thus shows their degree of engagement and willingness to engage based on these organizational factors conditions.

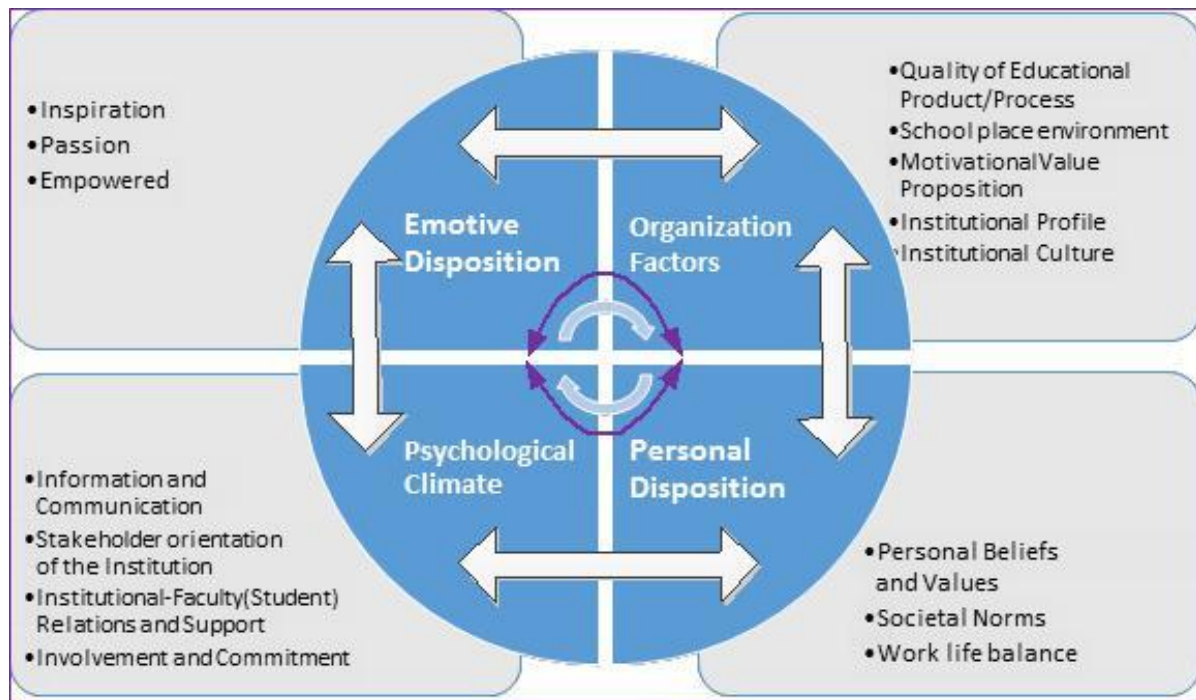
**2) Psychological-Connect Climatic Conditions** – People work and interact within the work environment that is not a static but an ongoing ever dynamic and multifarious and multifacted set of human interactions. While organizational factors are external of the human, the work performance is executed by a human and this goes into the psychological and pschomatic domains where people have tried for centuries to fathom and solve this intriguing human puzzle, which ultimately might not be explained or cannot be unfathomized. This has caused the world a multitude of problems and issues that shows that decades of research and studies in comprehending the human intrigues and idiosyncracies has always come to naught for the missing one element that lies in a single man"s pschotic or emotive actions that is contrary to basic research evidence. This underscores the organization relationships of the human interactions and relations based on their interpretations of information signals and the way or form and formats they are communicated across, all of which has an individualistic affectiveness on actions leading to the manager-subordinate relationships contained within the influence of the external organziational factors. In realtiy, a relationship does not amount to much, if they do not "connect" and the chemistry of connect goes beyond the normal superficiality of relationship. The intricacies of psychological affectiveness of the human relationships, and at a more realistic level, the "real connection chemistry goes into the blurry area of human psychomatic behavior which had been studied but presumably would be more individualistics than categorized group behavior. This will be a more realistic determinant of the levels and degrees and depths of engagement and relational engagement in the work situtaion or environment leading to commitment and involvement in the organization.

**3) Personal Disposition Condition Factors** – This goes into the more intrinsic individual human or people"s domain that is more personal than collective actions. Human live in a world based on their beliefs and their values though conditioned or dictated by social norms which are demonstrated externally in a "herd mentality", but not displaying the true internal intent or inherent disposition within or inside the "heart and mind" which is individualistic that can drive real actions

as opposed to social norms. These are not demonstrated openly but can affect the degree of intended and intensity of engagement, which ultimately cannot be totally forced due to intra personal-psychological affective resistance or heart-brain struggle of logics and feelings. But these intra dispositions can be influenced by other extrinsic factors, but towards a reduced level of potential engagement.

**4) Emotive Disposition Condition Factors** – This key factor is based on both the psychological and personal conditioning factors as they shape and form the innate and internal emotive response which is a “black hole” which science has tried to understand and inteprete with a certain degree of presumtious assertions. But ultimately, this is still based on the final emotive diposition of an individual which can be erratic and irrational to others but rational and acceptable in a split nano-second impulsive decision of the decision maker. This is the main driving force of passions for work, strives for degrees of empowerment and the inclination and inspirations to work or not work, engagement or disengagement or pretentious engagement.

#### 4 T “Takes Two to Tango” Framework of Faculty- Student Engagment



**Figure 1:** 4 T “Takes Two to Tango” Framework of Faculty- Student Engagement

Workplace or Workforce Engagement has traitionally been studied from the uni-directional approach through perception studies of the workforce of elements affecting their engagement behavior. In reality, researchers have over simplified the engagement “connection chemistry” and its multi faceted and multi directional interactions, which makes the “engagement equation” more complicated and complex than recognized.

An analogy to this is the creation of a rythmic and beautiful and yet successful Tango dance. For this to happen, it takes two to tango, with a pure flow of connection chemistry of both

parties within a suitable set of environmental factors and supplementary fixtures. This “connection chemistry” is also affected by the psychological and emotional and personal disposition of both parties. This means that these three dimensions must “connect and click” at all points of split nano seconds actions conditioned by these 3 main sets of factors and its sub-factors. This would inadvertently also mean that all these factors must “connect and click” at these split nano seconds simultaneously to create a beautiful successful tango.

To better understand the complexity involved in enaging both the student and the faculty, the analogy of the “Takes two to Tango” can be applied to establish the faculty-student engagement framework. The premises of this “Takes Two to Tango” Faculty-Student engagement framework (Figure 1), based on the factors conditions discussed earlier can be both a deterrent or an aspirant, are:

**Premise 1:** For a successful and fruitful faculty-student engagement, it must be established as a bi-relational two ways relational and consensual agreement to connect for the chemistry action to click so that both parties can fully and emotionally engage.

**Premise 2:** The factors conditions of the “bi-relational two ways relational and consensual agreement to connect for the chemistry action to click” exists for both parties, which are similar, but in an engaged situation, these conditioning factors must be synchronized for a successful and fruitful faculty-student engagement.

**Premise 3:** These factors conditions, when in a synchronized mode, demonstrate a multitude and multi faceted directional interplays of the factors conditions that ultimately creates very complicated and complex “engagement situations” that can either be a set of aspirants or deterrents for a successful and fruitful faculty-student engagement.

Based on these premises under which the factors conditions for each of the key faculty-student factors conditions operates, the following section will discuss each of these factors conditions from two sides of the parties that affects a successful and fruitful faculty-student engagement. These are:

**(1) Organization Factors Conditions** – This set of factor conditions deal with paraphernalia, the “staged set”, the physical aspects and infrastructure, external motivators, environmental setting where the engagement play and where the split second interplay is played out by the two parties of the faculty and student.

a. **Faculty and student Perspectives** – A faculty or student has a choice to choose to engage, disengage or partially engage or completely ignore the importance of engaging, which inherently means more time taken to make the faculty-student engagement successful and fruitful. Basically, since the components of these organizational factors are external of each party that forms the stage whether the engagement is staged, it is subsumed that they affects both the faculty and student similarly. All these takes place within the school place environment and infrastructure whereby the interactions take place in a set of physical setting and surroundings creating a degree of the conducive environment that supports the quality of the educational process and its final product. This engagement is influenced by the set of motivational value that each party perceive to derive from this engagement leading to the same output of a high quality product in the form of

the student's competencies and capacities. These motivational value proposition of the faculty involves the tangible and intangible incentives or requirements like the pay, cost/benefits, extras, additional perks and privileges or just the fulfilment of the basic work requirements that motivate or demotivate the faculty's contribution to this successful and fruitful faculty-student engagement. On the other hand, the motivational value proposition to the student can range from better and further development of student's self, improvements of knowledge and skills sets, operating under a more student centric or caring environment from a human that "cares" for his/her well being. The profile of the institution or the institutional culture works the same way for both as it is a common operand to both in terms of the institution reputation, its standing and status, or a pervasive "caring" culture that places human as the basic and priority factor. This works the same way for both as the better these factors are, the more the parties will work to maintain and sustain the profile and culture, thus forming a common platform of engagement.

**(2) Psychological-Relational-Connect Factors Conditions** – This set of factors conditions goes into the relationship which to a certain extent can be superficial in nature, as the relationship will not work unless there is depth and breadth which is dependant on "the chemistry to connect". Unless two person "connect and click", the engagement just touches on the superficiality of needed necessity or requirements, the tip of the engagement iceberg.

**a. Information and Communication** – The Information science discipline is as intriguing as the psychological science especially when it goes into the human domains of perception and interpretation of the information signals from sound, sight and bodily collations, which varies from one person to the next. The same set of information can be perceived and interpreted differently by the faculty or student within the similar set of institution environment and settings discussed earlier. In the high speed information technological era, these information signals are dispersed, communicated and received through multitude of channels like mobile or virtual technologies or third party communications, which could be distorted through interpretations. This creates a more complicated situation whereby the faculty and student communicate, exchange and interpret information signals in the faculty-student engagement equation.

**b. Stakeholder orientation and Institutional Support** – This is dependant on what and how the faculty and student perceive of the institution as "orientation or culture towards all stakeholders of a good caring, positive and outwards looking and oriented" where the faculty-student engagement is played out. In this case, these are the emotive and psychological aspects of the physical hardware where the faculty-student engagement is staged. Technically, this is the intangible aspects of the physical hardware, which is the "software and peopleware" aspects of the institution towards stakeholders and the support for the faculty-student engagement to "connect and click".

**c. Involvement and Commitment** – When the institution embark on the "engagement" imperatives to support better and more productive learning and development, the institution subsume that both the faculty and student wants to be engaged. The institution forgets that engagement cannot be wilfully forced on two persons, if they do not wish to, or they prefer to distance themselves from this engagement due to psychological and emotive reasons, personal dispositions or perceptions and organization conditions that influence the degree of success of the faculty-student engagement. Each faculty and student have the choice of the degree of involvement and commitment, and these cannot be forced or created but can be supplemented through the organization settings, environments and common understanding. These are intrinsic to each individual faculty and student as there could be a thousands and one trivial or significant or

insignificant reasons to be involved or be committed, as this is a human social connection-clicking factor that science can try to understand but can only fathomize or fantasize on scientific grounds, which are limited to lab studies.

(3) **Personal disposition Factors Conditions** – This goes into the personal values, beliefs or norms that each faculty or student choose to select and behave according to their fascinating but individualistic set of beliefs, which unfortunately cannot be dictated to a person, even though there is the pressure of social conformity, but in the end, it is a last minute individual decision that science could not possibly explain. No two faculty or student will have the same set of personal beliefs or values even though they work and live within the same or similar social norms but do not technically “breathe the same beliefs or values” within the establishment’s beliefs and values or norms. No amount of law or regulations can force these “herding towards a common set of beliefs and norms”, as the personal disposition of the faculty and student is too individualistic to just pretend to accept or act within the societal beliefs or norms that will not dictate their unconscious choice of the work life or student life balance that one chooses which ultimately is an individual choice or preferred condition.

(4) **Emotive Factors Conditions** – This set of emotive determinants is influenced by the psychotic and personal disposition in the school place as conditioned by a set of organizational conditions where the faculty-student engagement is played out. The key questions here, is whether the faculty or student is inspired or passionate enough to engage, disengage or pretend to engage. While the faculty feels that s/he has the responsibility to engage, but due to the school places settings and environment, their work load, their work-social-life balance, what will inspire, empower or even make them to be passionate about engaging the students, just based on the institution mission or goals, is a different matter. On the other hand, the student are already pushed by their immediate families or peers to do well to save the “face” of the family or for a better future through education, what can inspire or make them passionate to study or for the matter add to the engagement requirements, all of which are beyond the understanding of the normal student, or wanted by the students as these are more of a burden to be engaged with the faculty when they prefer to do what they want and hang out with their peers.

## **Implications and Recommendations**

An analogy is the fateful 23 June 2016 event that marked the “Brexit – Britain Exit” exercise when U.K divorced itself from EU, after a 43 years of tumultuous confrontational and conflicting relationship that does not show any forms of successful engagement that did not connect or click and that clearly missed out on the chemistry of the connectivity required of successful engagement or disengagement.

This analogy also holds true of the success of faculty-student engagement. It does take two to tango to ensure successful engagement, as it is not in just having a relationship across two parties or many parties, but that the relationship connects and clicks with chemistry of parties’ engagement to function actively and enthusiastically and dynamically. The above discussion of the “Takes Two to Tango” faculty-student engagement framework does paint a black picture that faculty-student engagement is a burden and will not work. On the contrary, this paper aims to demonstrate that full comprehension and understanding of the factors conditioning the two-way partnership between the faculty and student is an imperative to be studied and reviewed as opposed

to the present line of thought that “engagement” is about the physical attributes of the environment or the tangible and intangible motivators that influences a person to engage. But these are just the superficial external factors conditions, of which the internal personal and psychotic factors conditions are what really matters.

### **(1) Deterrents of Faculty-Student Engagement**

While the institution can set the stage in the forms of the supporting external paraphernalia by creating a conducive environment or the tangible and intangible motivators or through rules and regulations, these are external factors where the engagement play is staged. These can be manipulated and orchestrated but it belies the real personal disposition in terms of being passionate and inspired for the faculty to engage when they are burdened with their primary roles of teaching and learning, research and societal responsibilities, social and family life to really “care” about “kids of other families”. On the other hand, what inspires or make the student to be passionate about engaging with the faculty as they are duty bound to their family through studying for a better future in a “dog kill dog” society as imposed by the supposed to know all forebears and seniors who have gone through the same stages but in another era and time dimensions of which the geo-political, social-cultural requirements have changed. Even if the two parties are inspired and passionate enough to make the engagement relationship work, the bottom line is still the psychotic and emotive factors conditioning, though studied and researched as shown by leading researchers in the literature discussion, it is no longer in the domain of theoretical comprehension or understanding of the human behavior but the split nano-second human decisions and actions that makes both parties potentially connect and click. Unfortunately, this split nano-second decision to connect and click normally occurs on two separate time-frame segment, where the faculty might have good intentions but the student is not ready or vice versa or the external institutional factors conditions that interplay are not conducive or attractive as a stage or as motivational inducements. This would practically mean that all these theoretical aspects with good intents can fail to materialize as the psychotic and personal and emotive factors reigns as dominant but mysterious factors that can change the faculty-student engagement equation from success to ultimate failures. These mean that the faculty-student engagement cannot be forced as long as these inherent factors exist and “play the devilish” part of engagement.

### **(2) Aspirants of Faculty-Student Engagement**

While the deterrent factors conditions do not paint a positive and successful picture of the faculty-student engagement equation, this does not mean that it spells the end of the faculty-student engagement strive for the betterment of the student achievements and development. A better comprehension and understanding of these strong and omnipresent personal, emotive and psychological factors conditions could pave the way to a more fruitful and more successful faculty-student engagement. The better the understanding and the more understanding both parties are towards each other can potentially lead to a more amicable and desirable connect-click chemistry of engagement, as everyone have their own unique set of likes and dislikes, periodic emotive ups and downs, introvert and extrovert personal nature, and psychotic fleeting moments governing decision making and actions, based on the interpretation of information signals and communications mechanisms. As such, these aspirants, when understood can be managed within one’s notions and desires, though it takes a longer time where the short periods and the program of study might not sustain a more fruitful faculty-student engagement.

### (3) Recommendations

Based on this discussion of the faculty-student engagement as a set of aspirants or deterrents factors condition, some recommendations are called for:

- i. **Bi-directional two way faculty-engagement** – This practically means that a one-sided study or research into the faculty-student will not work well as these engagements are more personal, emotive and psychotic which are human based. As such, future research or for that matter, to make faculty-student engagement work, one must look at it or approach it as a two way bi-directional personal, psychotic and emotive of two human interactions.
- ii. **Psychotic, personal and emotive factors conditions** – As discussed above, dealing with the external organizational factors conditions are not adequate and appropriate. The external influencers is only the stage where the core behavioral aspects of the psychotic, emotive and personal factors reign dominant as key influences of successful and fruitful faculty-student engagements needs to be identified, studied and managed.
- iii. **Faculty-student engagement craze** – While the faculty-student engagement equation is potentially a very strong student developer focused on student-centricity for the benefit of the student as hyped by institutions, the institutions have to recognize that success is dependent on all the interplays of the multifarious and multifaceted factors conditions. These should be better comprehended and understood before embarking on this “engagement” journey which should be longer term focused and sustainable, and not be treated as a fleeting moment of infatuated fad.

In conclusion, while this paper has aimed at reviewing the faculty engagement and the student engagement or faculty-student engagement, there are many more in-depth issues that are involved and these need to be studied. The multifarious and multifaceted dimensions affecting faculty-student engagement that connect and click should be recognized and taken into consideration. Recognizing these can be deterring but at the same time can also lead to a more successful and fruitful engagement of the faculty-student.

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# **Students' Perception towards Active Learning Practices at Ramkhamhaeng University**

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## **Abstract**

The purposes of this research were to investigate students' perception regarding Active Learning Practices (ALP) at Ramkhamhaeng University classified by students' demographic variables, i.e., gender, age, year of study, and class attendance. Questionnaire survey was utilized with the samples of 436 students in the bachelor degree programs. The practices were operationalized using role of lecturers, role of students, class activities, evaluation and assessment, media and instructional equipment, course contents, and the usage of technology. Male and female students reported different perceptions regarding the usage of technology. No difference was found among students with different ages and years of study. Students' attendance affected the perceived ALP in all aspects except the course content and the usage of technology. Students reported they expected teachers to deliver course contents which are practical in real life, provide autonomy and student-centered learning, emphasize exercises and practices rather than lecture only, facilitate students' learning, increase the usage of case studies.

**Key words:** Active Learning Practices, Teaching and Learning, Student-Centered Learning

## **Introduction**

Thailand's Education Ministry has been trying to utilize information technology (IT) to manage the teaching and learning system among universities in Thailand. Teachers have to learn the methods to apply tools for this purpose which includes the internet and other applications in order to prepare a variety of teaching media (Niess, Lee & Kajder, 2008). The teaching approach has to be geared towards student-centered rather than teacher-centered as before. At the present time, many IT tools are available for teachers to choose from (Khammanee, 2012). Teachers have to adapt their roles to become facilitators who facilitate students' learning from these IT media. Students organize their own study under the teachers' guideline. This method of teaching is proactive in that students should actively seek for knowledge they need through available means of learning provided by the teachers, especially through the IT media and the internet. Teachers should plan the learning as team and apply case study method. Students are responsible for their own learning process by collecting information from various sources to create knowledge in order to solve the

hypothetical problems (Amnuayvorachai, 2012; Ketpichainarong & Sriwattanaorothi (n.d.); Kaewsanit, 2015).

Ramkhamhaeng University is now offering 13 faculties, 1 graduate office and 2 institutes offer 2 majors in diploma level, 72 majors in the bachelor level, 73 majors in the master level, and 20 majors in the doctoral level. Classes are offered as in-class and distance learning (Ramkhamhaeng University, 2014). Class attendance was not mandatory. In order to deliver teaching to a large number of students throughout the country, the university applies proactive learning practices. The proactive learning practices have been introduced in all majors of study in order to increase the effectiveness of the teaching and learning process.

The purpose of this research project was to investigate undergraduate students' perception regarding Ramkhamhaeng University's proactive learning practices. The results could help administrators to further develop and enhance the proactive learning practices at the university.

## **Research Objectives**

1. To examine students' perceptions regarding the Active Learning Practices at Ramkhamhaeng University
2. To compare students' perceptions regarding the Active Learning Practices based on gender, age, year of study, work status, credit transfer, and class attendance
3. To elicit reflections of students regarding the Active Learning Practices at the university.

## **Literature**

Silberman and Auerbach (2006) defined active learning as the approach that promotes group learning. Learners have to be cooperative and apply knowledge to practice. Attaporn and Koraneekid (2014) compiled 9 characteristics of active learning as follow:

1. Teacher's role. Teachers should be a facilitator and prepare materials and lessons rather than performing the role as a lecturer in class. Feeding information to students is not suitable for the modern context.
2. Student's role. Students learn by themselves and have to participate in the knowledge acquiring, brainstorming, conceptualizing, and reflecting through the interactions with each other.
3. Learning management system. There should be a system through which students could seek relevant information to the class content and record learning behaviors. Teachers have the duty to maintain the system.
4. Class content. Materials relevant to each class's content and objectives should be provided. This includes the suggestion of texts and outside reading for students to discuss and share.

5. Student-centered teaching. The teaching process focuses on the needs and approaches that students choose. Students choose their own pace of learning suitable for them.

6. Communication technology. Channels for communication between teachers and students and among students for class discussion should be established. IT system should be available for students to seek for information.

7. Behavior modification process. Students' behavior should be transformed from being a passive learner to be actively seeking knowledge they need.

8. Learning reflection. A session should be organized for students to reflect on what they learn from the activities.

9. Measurement and evaluation. The last dimension of proactive learning is an evaluation of the learning process so that students could learn and improve their behaviors further.

These nine characteristics were used as the construct of Active Learning Practices in this research project.

## **Research Methodology**

This research was a survey research. The samples included 450 students recruited using convenience sampling method at the main campus of Ramkhamhaeng University. The university is promoting the usage of Active learning Practices. A questionnaire was constructed based on the conceptual definitions of the abovementioned 9 dimensions. Three experts in the education field reviewed the questionnaire for content and construct validity (Tanchaisak, 2016). The questionnaire was pretested with 30 Ramkhamhaeng University's bachelor degree students. The pretest data were factor analyzed and resulted in 7 remaining dimensions namely: Teachers' role; Students' role; Course content; Class activities;

Class assessment and evaluation; Teaching media; and IT communication. Eighty eight items remained in the final version of questionnaire. The Cronbach's alpha ranged from 0.732 to 0.977 for the dimensions.

Part I of the questionnaire collected the demographic data consisted of gender, age, year of study, work status, credit transfer, faculty, and class attendance. Part II elicited data regarding the students' perception regarding the proactive learning practices of the university based on the 7 dimensions. 5-point rating scales were used to elicit data ranging from 1 = highly disagree to 5 = highly agree. Part III was an open-ended question asking for their reflections regarding the proactive learning practices the university was using. Questionnaires were distributed during the second semester of 2015. 436 sets were returned. The response rate was 96.89%.

## Results

The majority of the respondents were female (68.80%) aged between 21-25 years old (56.40%). Most were in the 4<sup>th</sup> year of study (30.04%). 65.10% were not working. 86.90% did not transfer credit from other institutions. The majority had attended class more than 8 times in the semester (47.70%).

The perceptions of students regarding the proactive learning practices at the university were averaged and reported in table 1.

**Table 1:** The perceptions of students regarding the proactive learning practices at Ramkhamhaeng University

	$\bar{X}$	SD
1. Teachers' role	4.10	.50
2. Class activities	4.02	.53
3. Course content	3.99	.56
4. Class assessment and evaluation	3.99	.53
5. Teaching media	3.99	.53
6. Students' role	3.97	.50
7. IT communication	3.75	.66
Overall	3.97	.46

Results revealed that in the overall level, students reported their classes were proactive ( $\bar{x} = 3.97$ ,  $SD = 0.46$ ). They reported that the class practices involved Teacher's role ( $\bar{x} = 4.10$ ,  $SD = 0.50$ ) followed by class activities ( $\bar{x} = 4.02$ ,  $SD = 0.53$ ). Teaching media, class assessment and evaluation, and course contents were rated equally ( $\bar{x} = 3.99$ ,  $SD = 0.53-0.56$ ). Followed by students' role ( $\bar{x} = 3.97$ ,  $SD = 0.50$ ) and IT communication ( $\bar{x} = 3.75$ ,  $SD = 0.66$ ) respectively.

**Gender.** The comparative analysis revealed that male and female students had different perceptions only in the IT communication aspect of the practices. Male's average score regarding IT communication was 3.83 ( $SD = .61$ ) while female's average score was 3.70 ( $SD = .68$ ) ( $t = 2.048$ ,  $p < .05$ ).

**Work status.** Students who had a full-time job had different perceptions from those who were not working in the overall level ( $t = -2.051$ ,  $p < .05$ ). Different perceptions were found regarding the level of students' role ( $t = -3.711$ ,  $p < .05$ ); course content ( $t = -2.559$ ,  $p < .05$ ); and class activities ( $t = -1.982$ ,  $p < .05$ ). For students' role, students who were

working reported the average score of 3.85 (SD = .45) while students who do not work reported the average score of 4.03 (SD = .52).

For course content, students who were working reported the average score of 3.90 (SD = .54) while students who do not work reported the average score of 4.04 (SD = .57). For class activities, students who were working reported the average score of 3.95 (SD = .51) while students who do not work reported the average score of 4.05 (SD = .54). Students who had full-time job agreed more with the proactive learning practice (see table 2).

**Table 2:** Comparison of perceptions between students who had full-time job and students who were not working

Proactive Learning Practices	Work Status				t
	Work		Not work		
	$\bar{X}$	SD	$\bar{X}$	SD	
1. Teachers' role	4.04	.50	4.13	.50	-1.807
2. Students' role	3.85	.45	4.03	.52	-3.711*
3. Course content	3.90	.54	4.04	.57	-2.559*
4. Class activities	3.95	.51	4.05	.54	-1.982*
5. Class assessment and evaluation	3.93	.56	4.03	.51	-1.866
6. Teaching media	3.92	.57	4.03	.50	-1.907
7. IT communication	3.79	.66	3.73	.66	.889
Overall	3.91	.45	4.01	.46	-2.051*

\*  $p < 0.05$

#### Credit transfer

Students who had transferred credit into the program reported different perception from students who had not transferred credit ( $t = -2.075$ ,  $p < .05$ ) regarding class activities ( $\bar{x} = 3.88$ ,  $SD = .49$  vs.  $\bar{x} = 4.04$ ,  $SD = .53$ ).

#### Class attendance

Students who attend classes had different perceptions from those who did not come to class. For teachers' role,  $F = 3.821$ ,  $df = 2, 433$ . For students' role,  $F = 5.738$ ,  $df = 2, 433$ . For class activities,  $F = 3.252$ ,  $df = 2, 433$ . For class assessment and evaluation,  $F = 3.134$ ,  $df = 2, 433$ . For teaching media,  $F = 4.458$ ,  $df = 2, 433$ . (See table 3).

**Table 3:** ANOVA results for the perceptions of students regarding the proactive learning practices classified by class attendance

Source of variance	SS	df	MS	F
Teachers' role Between group	1.882	2	.941	3.821*
Within group	106.606	433	.246	
Total	108.487	435		
Students' role Between group	2.847	2	1.423	5.738*
Within group	107.415	433	.248	
Total	110.261	435		
Course content Between group	1.573	2	.787	2.537
Within group	134.257	433	.310	
Total	135.830	435		
Class activities Between group	1.805	2	.903	3.252*
Within group	120.176	433	.278	
Total	121.981	435		
Class assessment and evaluation Between group	1.759	2	.880	3.134*
Within group	121.535	433	.281	
Total	123.294	435		
Teaching media Between group	2.433	2	1.217	4.458*
Within group	118.168	433	.273	
Total	120.601	435		
IT communication Between group	.387	2	.193	.443
Within group	189.043	433	.437	

Source of variance	SS	df	MS	F
Total	189.430	435		

\*  $p < 0.05$

Students in different age groups and year of study did not report significance difference regarding the proactive learning practices.

### **Open-ended question results**

Students reported that teachers delivered knowledge that could be applied in real life situation, provide autonomy, and centered on students' need, focused on implementation of knowledge, facilitate the learning. Students reported they were enthusiastic and could apply knowledge learned to solve problems in their work. They would like to have more group activities and case studies, field trip, and special lectures. Students suggested teachers to create a center to compile documents and allow them to submit homework through the internet.

## **Discussion**

Ramkhamhaeng University is an open university, hence, the teaching and learning process is arranged in the manner that allow students to choose whether they would come to class or not. Class attendance was not mandatory. Hence, students could choose whether they would perform self-study or take classes. Teachers perform a lecturer role while teaching in class but a facilitator for students who do not come to class. This involves advising through various channels such as email, facebook, line, and etc. Students who chose not to come to class had to proactively seek knowledge on their own since teachers would not feed them (Kaewsanit, 2015; Kreusang, 2013).

It was very likely that male students were keener in IT skills than female students. Female students prefer the human method more than male. Hence, they prefer to use IT communication in their learning more than female students.

Furthermore, full time students or those who did not have a full-time job spend full time for study so they could participate in class activities and perform students' roles such as group discussion or field trip. They were closer to teachers and depend more on the teachers as the source of knowledge. Students who had full-time job were involved less with the class and had to rely more on themselves in order to study, i.e. rely more on proactive learning than those who were closer to teachers. They had to perform more of the students' role. They had to proactively seek for class contents and class activities more than non-working

students. Moreover, since they mostly rely on themselves rather than the teachers so they did not rely on social media or IT communication to contact with teachers.

Students who transferred credits had less exposure to classes, hence, they participated less in class activities. Students who attended class were exposed more than those who did not attend class toward teachers' role, students' role, class activities, and class assessment and evaluation. They perceived class content and IT communication in the same degree as those who did not come to class. In-class teaching offered more activities and marks for assignments more than distance learning. Most distance learning class had no assignment and special marks.

## **Conclusion and Recommendation**

The results suggested that students who chose distance learning were more proactive than those students who attended in-class learning. Naturally, students who attended class would have more intimate relationship with teachers and had the tendency to rely on teachers. Distance learning students had less relationship with teachers and had to proactively seek knowledge on their own. Teachers should try to promote relationship with students both in the in-class and distance modes. IT channel for communication should be established for students to gain access to teachers. More IT channels should be opened for students both for advising and knowledge seeking. Class activities should be offered online, such as Line group or Facebook group, so students in both in-class and distance learning modes could participate and share knowledge. Class materials should be reviewed by students and teachers should help them to have accurate information. More assignments should be created such as projects, role play, and oral presentation. Teaching media should be prepared in relevance to class activities and make them available online.

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# **The Impact of Taiwanese College Students' Learning Motivation from Self-determination Perspective on Learning Outcomes: Moderating Roles of Multi-traits**

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## **Abstract**

The purpose of this study is to explore the associations among learning motivation, engagement and outcomes, and the moderating role of various traits in the relationship between deep approaches to learning and outcomes. Based on data from 2,340 students in multiple universities in Taiwan, we propose two alternative models, tested by Structural Equation Modeling (SEM). The findings suggest that deep approaches to learning play a critical role in improving college students' cognitive and non-cognitive gains. The moderating effect in learning outcomes could be attributed to student and faculty traits, suggesting that in order to understand students' learning process each trait should be considered individually. Implications for theory and practice are also discussed in this paper.

**Keywords:** Learning Motivation, Deep Approaches to Learning, Student Learning Outcome, Structural Equation Modeling

## **Introduction**

Higher education plays a key role in national economic development (Choi & Rhee, 2014). According to statistics from the Ministry of Education (MOE), there were 166 higher education institutions (HEIs) in Taiwan in 2014. This form of mass education provides more educational opportunities for students, but also raises problems like low teaching quality and competitiveness (Shin & Harman, 2009). Recent studies on HEIs have indicated that student learning outcomes (LOs) can be significantly improved through teaching quality improvement, curriculum reform and equipment optimization (Maringe & Sing 2014; Pike et al., 2011, 2012), but students' psychological traits are less explored (Chen et al., 2009). Cole et al. (2004) found that learning motivation (LM) is the main predictive indicator of learning

efficiency and outcomes. Therefore, how to prompt students' LM has become an urgent issue for Taiwanese HEIs.

Western scholars have attempted to understand learning psychology and behavior (Deci & Ryan, 2000) from the perspective of achievement motivation, although cross-cultural studies have gradually gained more attention. Research has shown that the psychological process and behavior of non-Western samples in pursuing achievement are significantly different from those seen in Western samples (Chang et al., 2011; Chen et al., 2009). With regard to Taiwanese students, Chen et al. (2009) found that these took factors like social expectations, the corresponding obligations, and role identification into account, in addition to autonomous interest and self-identity. Therefore, to improve the performance of Taiwanese college students it is necessary to further verify the perception and status of LM by examining two important factors, academic identity (Nasir et al., 2009) and role identity (White et al., 2008), and their correlation with outcome variables.

Studies show that the greatest influence on students' experience and perceptions of the whole learning process are teaching quality and interactions (Pike et al., 2012), which can arouse greater class participation and positive attitudes. Furthermore, the methods and strategies of learning engagement that students adopt are the key to internalizing the knowledge they are exposed to. Smart et al. (2000) regarded student learning engagement as an important mediator in the relationship between academic development and LOs, with learning engagement referring to the learning behaviors of students and their adaptability to HEIs and course learning (Kuh et al., 2006).

Marton and Säljö (1976) proposed the "deep process", which effectively distinguishes differences in students' reactions to learning tasks. The deep approach to learning (DAL) shows that students' ability to extract information is the key point to effective learning and obtaining better outcomes. Students applying DAL can process, preserve, integrate and transfer important information more quickly than those applying surface approaches. Take as a whole, the evidence suggests that the ways students adopt DAL may have different consequences not only for their approaches to learning, but also the quality of their outcomes.

Previous studies discussing the relationship between learning engagement and outcomes often reached different, contradictory results (Campbell & Cabrera, 2014; Pike et al., 2011, 2012; Reason et al., 2010). It is argued that these inconsistent findings might be caused by contextual variables, such as institutional and student traits (Pike et al., 2011). Additionally, faculty traits should be also considered, because the teaching style, personality and attitude of teachers would directly affect students' learning and outcomes.

The current study, examining Taiwanese HEIs' students, will thus help in understanding the factors that influence LOs by proposed a learning motivation theory with a more complete conceptual framework, so as to extend its implications and generalization. The findings of this study can be also used as to enhance generic student competencies and

improve course design and teaching quality based on LM and DAL, as well as identifying different contextual factors to find the optimal conditions for promoting LOs.

## **Literature review**

### **Theoretical background**

This study is based on self-determination theory (SDT), proposed by Deci and Ryan (1985), which emphasizes that individuals have the intrinsic motivation to conduct behaviors in order to address their interests. It also assumes that individuals have three basic requirements: autonomy, competency and social relatedness. Deci and Ryan (2000, 2002) claimed a high level of autonomy and competency will enable individuals to generate intrinsic motivation, and enhance interpersonal interaction through social relatedness. Therefore, SDT, integrating many social contextual factors and individual psychological variables (Guay et al., 2008) and influencing optimal learning, learning engagement and well-being, has been widely applied in education.

Vallerand et al. (1997) proposed hierarchical models of intrinsic and extrinsic motivation based on SDT, which showed that the motivation model of individual behavior mainly follows social context→ psychological intermediary→ motivation pattern→ behavioral results. Self-determination also positively influences the learning process and learning outcomes (Mummel & Randler, 2012). The purpose of measuring LOs is to make students familiar with their learning status, which can enable teachers to improve teaching quality and learning efficiency (Guay et al., 2008). Pike et al. (2011) proposed that HEIs' educational expenditures and student learning engagement might influence LOs, as represented by two scales: cognitive and non-cognitive gains. Referring to Pike et al. (2011), this study adopts cognitive and non-cognitive gains as the indicators to measure LOs.

### **Learning motivation**

The differences between individuals in learning ability and motivation are often regarded as key predictors for learning and training effectiveness (Cole et al., 2004). LM refers to learners' willingness to participate in a learning program, which will influence the direction and focus of the decision-making process. Western research might not be completely extended to an Asian context because of cultural differences. According to the conceptual framework proposed by Chen et al. (2009), the academic achievement of Chinese students derives from social expectations and autonomous interests, which are derived from a sense of obligation and autonomy of the individual, respectively. The aim of this study is thus to explore the influence of "academic identity" (personal goals) and "role identity" (vertical goals) on Chinese students' psychology and behavior in pursuing academic goals (Chen et al., 2009; Nasir et al., 2009; White et al., 2008).

Role and academic identities are conducive to stimulating and maintaining students' interest in learning and enabling them to think about the nature and implications of knowledge thoroughly. Previous studies have shown that students' autonomous interest and competency are the key components for establishing academic identity, and that academic identity, learning motivation, engagement, and academic achievement are related (Lounsbury et al., 2005). Therefore, this study proposes following hypotheses:

**Hypothesis 1** Academic identity and learning engagement ((1a) higher-order learning, (1b) integrative learning, and (1c) reflective learning) have a positive relationship.

**Hypothesis 2** Role identity and learning engagement ((2a) higher-order learning, (2b) integrative learning, and (2c) reflective learning) have a positive relationship.

### **Learning engagement: Deep Approach to Learning**

Students' learning engagement can be regarded as the quality of their learning experience. The physical and psychological efforts that students make depend on the active role they play in the learning process (Choi & Rhee, 2014). Therefore, in the process of inspiring students' learning orientation and engagement, teachers should turn from passive, teacher-oriented teaching methods to active, learner-centered activity design, and commit to bringing students to a deeper understanding, so they can apply real-life examples to different situations (Tagg, 2003), a concept known as DAL. As to for variables of DAL, these include higher-order, integrative and reflective learning (Biggs & Tang, 2011; Campbell & Cabrera, 2014; Pascarella et al., 2013). Based on Laird et al. (2008), this study regards higher-order, integrative and reflective learning as the measured variables of DAL.

Scholars have examined whether DAL can effectively enhance LOs (Laird et al., 2008; Reason et al., 2010), with conflicting results. Nevertheless, based Aristotle's claims for phronesis and practical wisdom, the application of general principles and knowledge will help students to face unique situations, understand and internalize new information, and thus enhance their knowledge, skills and abilities (Oleson & Hora, 2014). In addition, explicit and systematic course instruction will help students to not only focus on the acquisition of knowledge and facts, but promote their understanding of substantive content and implied significance (Laird et al., 2006), which are conducive to enhancing critical thinking skills and cognitive needs (Pascarella et al., 2013). Therefore, this study proposes the following hypotheses:

**Hypothesis 3** Higher-order learning and LOs have a positive relationship.

**Hypothesis 4** Integrative learning and LOs have a positive relationship.

**Hypothesis 5** Reflective learning and LOs have a positive relationship.

## **The influence of contextual variables on DAL and LOs**

Contextual factors play an important role in students' practice of DAL (Tagg 2003). Campbell and Cabrera (2014) found that higher-order, integrative and reflective learning only have a slight influence on GPA, probably because of the different contexts of institutions. Cooperation between institutions (e.g., large, research institutions) and faculties and administrators ensures greater academic rigor, because these institutions would ask the faculties to apply teaching practices and methods that can enhance DAL (Biggs & Tang, 2011). Pascarella et al. (2013) reported similar findings in a Liberal Arts College and Research University, with the relationships among DAL, critical thinking and cognitive need being moderated by several factors.

As there are many contextual factors affecting DAL and LOs, we cannot consider them all into this study. However, scholars state that it is necessary to consider the key factors, such as the traits of students, HEIs and faculties, to obtain a more comprehensive understanding of the students' learning process (Choi & Rhee, 2014; Laird et al., 2008). Therefore, this study proposes the following hypothesis:

**Hypothesis 6** The different traits of students, HEIs and faculties will affect the relationship between DAL and LOs.

## **Research Method**

### **Sampling**

This study proposed a framework to explore the correlations and development mode of learning motivation, engagement and outcomes. It sampled from all Taiwanese HEIs, including public and private, vocational and general ones. This study also incorporated teaching funding support from MOE of Taiwan as a sampling condition, as HEIs who obtain such funds are recognized as providing quality teaching.

This study selected 16 HEIs. After simple random sampling, a total of 2,354 questionnaires were returned. Since freshmen were not familiar with the learning environment, all participants in this study were sophomores, junior and senior students. Excluding 14 invalid questionnaires, we obtained 2,340 valid ones and 56.6% of them were from female respondents. 48.7% of them were from sophomores, 38.9% juniors and 10.8% seniors. Moreover, most participants (62.0%) spent less than five hours on self-study each week, and 26.3% of them 6-10 hours. In order to generalize the results, this study simplified the influence of disciplines, with 65.8% of the participants being social science majors and 34.2% natural science majors.

## **Instrument**

In the learning motivation construct, academic identity is the degree to which the learners understand and identify their academic interest and ability, which could be used to evaluate their engagement in learning activities through pursuing goals. The academic identity scale adopted in this study was the four items proposed by Nasir et al. (2009) (e.g., “The courses are very suitable for me”). As to role identity, it is the degree to which the students recognize their identity as a learner through participating in learning activities and teacher-student interactions under the influence of social context. This study adopted five items developed by White et al. (2008) (e.g., “Generally speaking, I think it is appropriate for me as a college student to attend study sessions”).

DAL is an important construct in learning engagement, and assessed by three scales developed by Campbell and Cabrera (2014), Laird et al. (2006, 2008) and Pascarella et al. (2013), which include higher-order, integrative and reflective learning. Higher-order learning was measured by four items, emphasizing that students should advance their thinking skills. Integrative learning consists of five items, including students’ participation in learning activities and their ability to integrate ideas and thoughts from various sources. Reflective learning contains two items, emphasizing that students could apply their new learning to real life after integrating and extending new knowledge.

The construct of LOs is divided into cognitive and non-cognitive gains. This study adopts the scale proposed by Pike et al. (2011). The cognitive gains scale contains nine items and requires students to point out their progress in college learning (e.g., thinking critically and analytically), and the non-cognitive gains scale was measured by seven items concerning self-understanding, working with others, developing ethical standards, and civic/community engagement. All items were measured with a seven-point Likert scale.

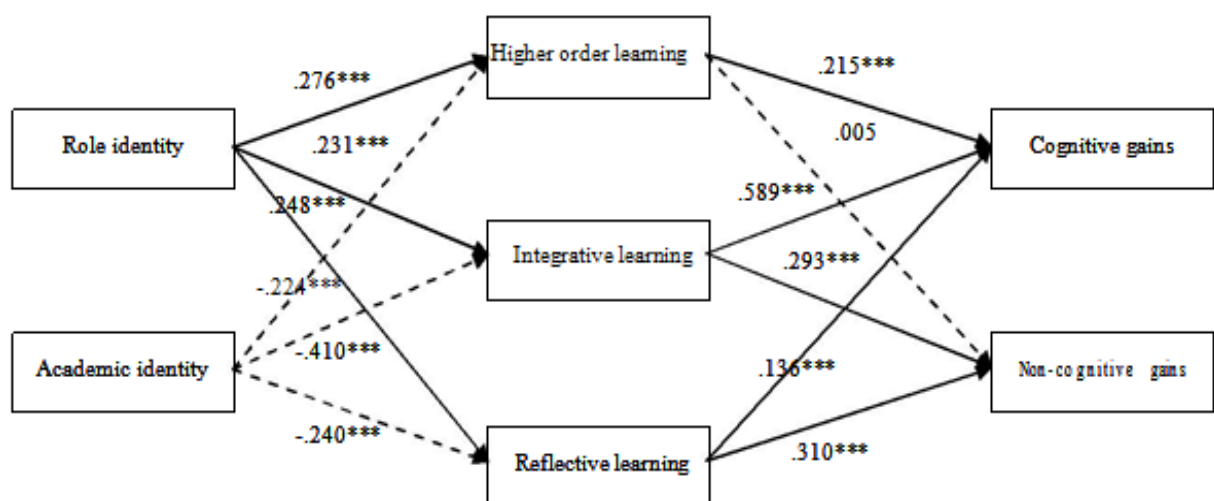
Students may also be affected by factors in the learning process that may disrupt learning engagement. Specifically, differences in the relationship between learning engagement and LOs are caused by variables like student, institutional and faculty traits (Chang, Bai, & Wang 2014; Choi & Rhee, 2014). Student traits mainly consist of background characteristics (e.g., gender, household income, first-generation status) and learning experience (e.g., years in university, major). Institutional traits refer to structural characteristics, such as location, form (public or private) and mission. And teacher traits mean teaching quality and student-faculty interaction, measured with three items and a seven-point Likert scale.

## Analysis and Result

### SEM analysis results

This study adopts SEM to test the structural mode of the model and interpret the explained variation of constructs, thus explaining the strength of the cause effect between constructs. Goodness-of-fit tests showed that the original conceptual model failed to properly explain the relationships among all variables ( $\chi^2=6475.518$ ;  $df=482$ ;  $RMSEA=.073$ ;  $SRMR=.097$ ;  $AGFI=.825$ ;  $CFI=.849$ ). Because the criteria for the RMSEA and SRMR were exceeded and AGFI and CFI were lower, t-values for the effect parameters were examined to determine if any non-significant paths could be eliminated. Several non-significant relationships were identified and fixed to zero. After we examined the modification indices for the relationships among observed variables, the resulting model provided a better representation of the relationships ( $\chi^2=1304.606$ ;  $df=407$ ;  $RMSEA=.031$ ;  $SRMR=.044$ ;  $AGFI=.954$ ;  $CFI=.977$ ).

H1a, b, c stated that role identity positively affects high-order, integrative, and reflective learning. Figure 1 shows that role identity ( $\beta=.276$ ,  $p<.001$ ;  $\beta=.231$ ,  $p<.001$ ;  $\beta=.248$ ,  $p<.001$ ) has significantly positive influences on high-order, integrative, and reflective learning, which supports H1a, b, c. Although academic identity ( $\beta=-.224$ ,  $p<.001$ ;  $\beta=-.410$ ,  $p<.001$ ;  $\beta=-.240$ ,  $p<.001$ ) significantly influences high-order, integrative, and reflective learning, these were negative relationship, rejecting H2a, b, c. Moreover, while high-order learning insignificantly affected non-cognitive gains, the other path coefficients on correlations from DAL [high-order ( $\beta=.215$ ,  $p<.001$ ), integrative ( $\beta=.589$ ,  $p<.001$ ;  $\beta=.293$ ,  $p<.001$ ), and reflective learning ( $\beta=.136$ ,  $p<.001$ ;  $\beta=.310$ ,  $p<.001$ )] to LOs (cognitive and non-cognitive gains) were positive and significant, full supporting H4 and H5, but partially supporting H3. These findings suggest critical DAL, higher-order, integrative, and reflective learning are central factors in explaining LOs in a higher education context.



**Figure 1:** Structural equation modeling with standardized coefficients

### Moderating effects on the relationship between DAL and LOs

To test the moderating effects of student, institutional and faculty traits on the relationship between DAL and LOs, we mean centered DAL to reduce multicollinearity (Sharma et al., 1981) and estimated two graphic depictions of the full structural equation models. Student, institutional and faculty traits are entered as moderating variables affecting the main path in the model, with the results shown in Table 1 . In the first model we multiplied DAL with each trait and incorporated it into the interdependent variable for analysis, so as to test the influence of situation variables on the main effect. The result showed that gender ( $\beta=.150$ ,  $p<.001$ ) and faculty traits ( $\beta=.047$ ,  $p<.001$ ) have positive moderating effects on the relationship between DAL and cognitive gains. In the second model, the estimated coefficient of the moderating term between DAL and household income on non-cognitive gains is negative and significant ( $\beta=-.272$ ,  $p<.001$ ), as is the moderating term between DAL and year of university on non-cognitive gains ( $\beta=-.156$ ,  $p<.001$ ), which partially supports H6.

**Table 1:** Examination of moderated effect

Variables	Cognitive gains	Non-cognitive gains
Deep approach to learning	.818(.112)***	.853(.161)***
Student traits		
Gender	.150(.020)***	.076(.028)
Household income	-.091(.023)	-.272(.033)***
First-generation status	-.079(.015)	-.059(.021)
Year of university	.001(.013)	-.156(.020)***
Major	.017(.020)	.055(.029)
Institutional traits		
Location	-.030(.015)	-.070(.022)
Form	-.009(.020)	.057(.030)
Mission	.025(.018)	-.040(.026)
Faculty traits	.047(.008)***	.019(.011)
Chi-square (df)	171.287(90)	107.860(54)
RMSEA	.020	.021
SRMR	.030	.025
AGFI	.984	.985
CFI	.999	.999

Notes: \*\*\*  $p<0.001$ .

Figure 3 indicates that the effect of DAL on cognitive gains differed by gender and faculty traits (high vs. low teaching quality). The steeper slope for female students suggests that those who are more actively engaged in DAL receive more cognitive gains. Similarly, high teaching quality and teacher-student interaction can enhance LOs and make students obtain more cognitive gains.

Likewise, as shown in Figure 4, the steeper slope of low household income students, compared with that of high household income students, shows the stronger effects the former experience with regard to non-cognitive gains. Another interesting point is the steeper slope of sophomores, compared with that of other years, and these students reported being more engaged in DAL, and thus more non-cognitive gains.

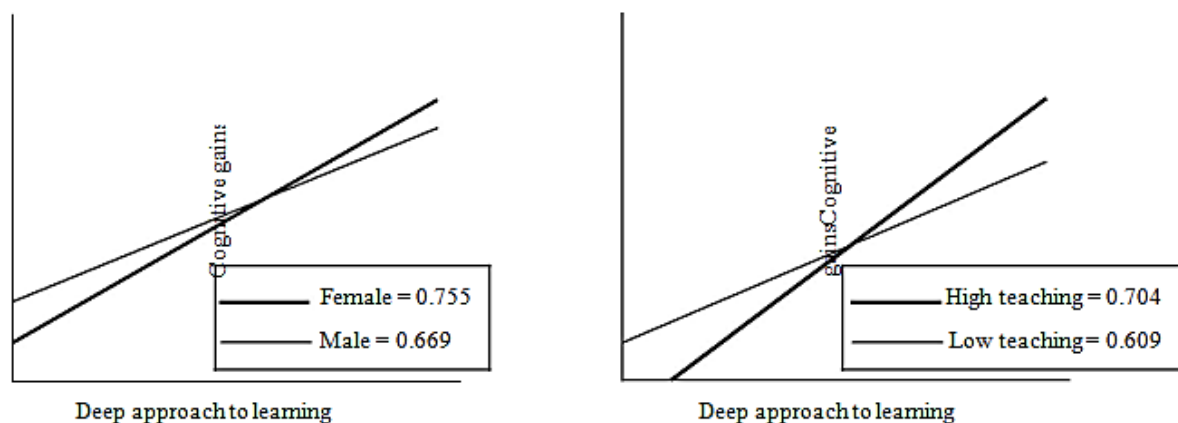


Figure 3. Effect of moderators on relationship between DAL and cognitive gains

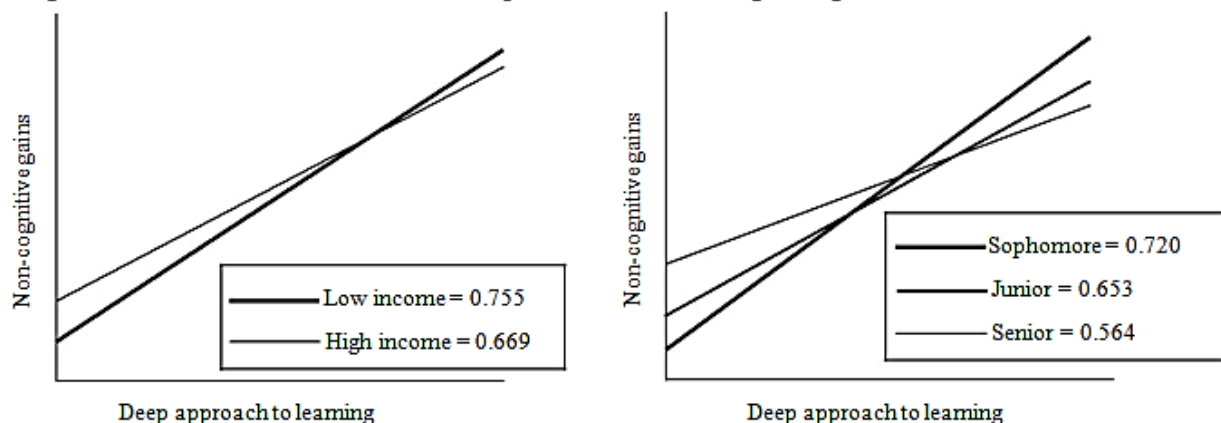


Figure 4: Effect of moderators on relationship between DAL and non-cognitive gains

## Discussion and conclusions

This study explored the significant developmental forms of learning motivation-engagement-outcome contexts that facilitate LOs at Taiwanese HEIs. Referring to SDT, DAL and the achievement goals proposed by Chen et al. (2009), the results show the correlations

among main variables and the influence of each contextual factor on these relationships. Our findings suggest the relationships between role identity and the tree DAL constructs are positively significant. Therefore, the more the students understand and identify with their role obligations, the more they will be engaged in DAL activities.

For Taiwanese college students, their obligation to social expectations may encourage them to pursue academic achievement. However, our findings revealed that academic identity has negative influences on higher-order, integrative and reflective learning. This does not exactly conform to the motivation theories promoted by Western scholars, but is consistent with Chen et al. (2009). In other words, the LM based on psychological theory must make full consideration of cross-cultural factors (Chang et al., 2011). Although Taiwanese students are likely to have autonomous interest or competency towards academic goals, their autonomy with regard to selecting these goals is still subjected to limitations of various social expectations, in contrast to Western students.

The findings demonstrate that higher-order, integrative and reflective learning are positively related to cognitive and non-cognitive gains, thus supporting the use of DAL. The research results echo the opinions of Biggs and Tang (2011), Campbell and Cabrera (2014), Laird et al. (2008), Maringe and Sing (2014), and Pascarella et al. (2013) that encouraging students to use DAL requires training in approaches to critical engagement with texts and writing critically, and in the application of conceptual ideas in designing research questions and empirical investigations.

Higher-order learning had a significant direct effect on cognitive gains but not on non-cognitive gains. This implies that Taiwanese HEIs have insufficiently emphasized general education and the courses they provide are not designed specifically for certain teaching aims, such as enhancing students' social adaptability, ethical values and soft skills. Moreover, the educational funding granted by the government is insufficient to cover the necessary education expenditures, and this indirectly lowers the students' understanding and practice of ethics, values and self-belief. Additionally, non-cognitive gains were derived from students' established social expectations and role obligations in this study, which might further weaken the effect of higher-order learning.

In terms of contextual variables, this study examined whether student, institutional and faculty traits influence the relationships between DAL and LOs. Our findings demonstrate that gender and faculty traits (e.g., teaching quality, interaction with students, and pedagogical differences) will moderate the relationship between DAL and cognitive gains. This echoes the claims of Chang et al. (2014) that students and faculties are two leading actors in the classroom. However, only student traits have a significant and negative moderating effect on the relationship between DAL and non-cognitive gains, indicating that the effect of DAL will be weakened by students' traits. In terms of household income, low-income students engage more efforts in DAL to improve non-cognitive gains than high-income students. Additionally, the non-cognitive gains obtained by sophomores are higher than those obtained by seniors, probably for the following reasons. For one thing, many

students from low-income households have to do part-time jobs to cover their tuition or living expenses. They thus have to develop their own philosophy of life, ethical standards and values in relation to the learning engagement process earlier than more privileged students. In addition, low-income students often lack learning resources, such as computers, supplementary education and learning materials, and so may be slower in acquiring and enhancing professional skills. They are thus more sensitive to non-cognitive gains than other students.

In sum, this study makes three important theoretical contributions to the higher education literature. Firstly, previous LM studies by Western researchers mainly emphasized the importance of intrinsic interest, autonomy and competency to meet academic achievement goals. They thus ignored the positive influence of external social expectations. This study adopted the cross-cultural view suggested by Chen et al. (2009), based on the idea that students from Asian societies have more positive self-regard and identification with social roles than Western students. Moreover, in the face of high role obligations generated by vertical goals, Asian students regard successful academic performance as a responsibility to meet parental expectation. Specifically, even if they have little intrinsic interest or inadequate competence, they will try their best to do well. As a result, some students may get trapped in the under-achiever dilemma, as experiences of failure may transform their learning interest into responsibilities and obligations, which produce maladaptive behaviors in the long run and lower engagement in DAL.

Secondly, this study confirms that the national studies of the NSSE DAL constructs do, in fact, hold for various HEIs. It also supports the recommendation of Campbell and Cabrera (2014) about the need to replicate past research on the impact of DAL on college students. Our replication of multi-institutional studies suggests that three DAL constructs could be useful for formative assessment, enabling HEIs to track progress across time and possibly across institutions. This study also supports the implicit hypothesis made by Mayhew et al. (2012) that higher-order, integrative and reflective learning are themselves manifestations of a higher order learning factor; namely, DAL. Our measurement of three DAL constructs differed from that of Campbell and Cabrera's (2014), as we found the higher-order learning construct was the most reliable indicator of the second order DAL constructs, with fewer measurement errors. HEIs might thus consider the items in this construct to be particularly important for interventions that target students' DAL, with a focus on the degree to which students believe that their courses emphasize advanced thinking skills (Laird et al., 2008; Pascarella et al., 2013).

Thirdly, this study suggests that higher education researchers should consider various features more seriously as moderating variables, like student, institutional and faculty traits, when they conceptualize DAL influences on student LOs. This viewpoint is consistent with Pike et al. (2011) which stated that any links between learning engagement and outcomes are likely to be strengthened or attenuated due to differences in student and institutional characteristics. Furthermore, this study added faculty traits to more clearly to examine how DAL is consistently related to LOs.

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# **A Development of a Learning Management Model for Special Education Schools**

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## **Abstract**

This study was conducted in three phases. The first phase involved structured interviews with 32 administrators and teachers from 16 special education schools to collect data concerning the conditions of and problems in the learning management of special education schools. The data collected were used as the preliminary information on which a Model of Learning Management for Special Education Schools was drafted. Interviews were done face-to-face. The second phase of the study involved a Focus group of 15 stakeholders of special education, including administrators, teachers, special education specialists, and parents. The group was asked to scrutinize the first draft Model. Both of these phases yielded qualitative data which the researcher used as a basis to refine the Model. The final phase of the study was conducted with 301 administrators and teachers from four groups of schools, namely, schools for the hearing impaired, schools for the visually impaired, schools for the cognitively impaired, and schools for the physical impaired. The instrument for this phase was a 5-point Likert type scale which the sample group used as the instrument to evaluate the Model. The study of the three phases had been carried out during 2015 and early 2016. The finished Model for learning management of special education schools consisted of three components and a number of relating sub-components, namely, Fundamental factors, Processes, and Products. For Fundamental factors, it included such elements as policy and administration, personnel, budgets, technology, material and equipment, and facilities and environment conducive to learning. For Processes, the elements were assessment of learning, instructional design, Individual Educational Plans, and assessment of learning. For Products, it included learners, teachers and administrators. The Model was rated as highly appropriate for employment in the schools for special needs children.

**Keywords:** Learning Management, Special Education, Special Needs Children

## **Introduction**

The Education for Persons with Disabilities Act of 2008 specifies standards for special education teachers, both in public and private schools, that their educational qualifications must be at least at the Bachelor's level or higher. They should be encouraged to continue their training and skills in providing education for people with disabilities. The state must provide funding for research and technology. (Ministry of Education, 2008). Both normal education teachers and special education teachers are educational resources that are essential for the development of their students so they can integrate into a normal life in society. Accordingly, it is important that teachers be consistently encouraged to find ways and means to effectively manage the learning of their students. Federation for Children with Special Needs in the United States stated that the most important principle of special education is to take into account the individuality of each child. It is necessary to develop a special education teacher with the ability to sight all the kids as the individuality with special talent and potential, and needs. (Council for Exceptional Children, 2003). In addition, in developing special education teachers, it is not

only the development of knowledge and skills in educational management but it is also important to develop their professional ethics (Council for Exceptional Children, 2003).

Children with special needs should be treated equally as individuals in the same society as other normal children. Providing them with proper facilities, equipment, learning, it is just only one of the many aspects of equality for them to lead a happy life in society along with other people, and not to be a burden to society (Sriya Niyumtum, et al, 2005). The education for children with special needs called "special education" is rather inclusive. It covers a wide range of children with various types of disabilities: visual impairments, hearing impairments, emotional/behavioral problems, children who have difficulty learning, and multiple disabilities, to name just a few. These children may not get the full benefit of education provided for the normal children. Therefore, special education should have certain features which are different from that provided for the normal children in terms of teaching method, subjects matter, tools and equipment needed for the teaching. Special education should respond to the needs and abilities of each individual.

Special education is the practice of educating students with special educational needs in a way that addresses their individual differences and needs. Ideally, this process involves the individually planned and systematically monitored arrangement of teaching procedures, adapted equipment and materials, and accessible settings. These interventions are designed to help learners with special needs achieve a higher level of personal self-sufficiency and success in school and their community, than may be available if the student were only given access to a typical classroom education. (Ojala, 2004, p.24-25)

To manage education for children with special needs, special education schools must provide supplementary support and resource for teaching, technology, material and equipment to support learning. According to NCSE (2013, p.16-17), it pointed out that the policy advice should serve the needs of the students rather than the system, and in a mainstream class, students with special educational needs should receive additional attention from the class teacher through differentiation of the curriculum and/ or additional teaching support provided by a resource/learning support teacher.

Education for children with special needs which, by itself, is different from typical children's education, must be clearer than the primary education. A special education program should be customized to address each individual student's unique needs. Special educators provide a continuum of services, in which students with special needs receives varying degrees of support based on their individual needs. Special education programs need to be individualized so that they address the unique combination of needs in a given student (Goodman, 1990). In defining the term "special education," Bryant, Smith, and Bryant (2008) also touch on the management of learning that since special education refers to education that is designed specifically for students with special needs at all levels, therefore, it should also be managed in a special way, such as the adjustment of the teaching methods, and an operation of the environments and media services to facilitate learning. It is evident that these individuals can not benefit fully from the usual general education due to one or more of their disabilities.

Teaching methods for special education teachers differ in various aspect from general education. Teaching skills are part of the educational program design and the heart of special education. The special education teacher must remember that needs of learners in the classroom is the most important in the learning and teaching management of individual. Special education teachers must have not only cognitive and academic skills but also the ability to read, write and

communicate in spoken language including computing solutions and thinking to understand the course of children in each grade level to work effectively (Council for Exceptional Children, 2003). The teaching styles and methods of special education teachers must match students learning styles and needs, and provide more appropriate accommodations and environment than general/regular education, so that special education methods are more intensive and supportive than those used for general/ normal students. Deshler & Torgeson (as cited in Smith, & Tyler, 2010, p.25) stated that effective special education can share six common features as: (1) validated: uses practices proved effective through research; (2) individually determined: matches teaching procedures to individuals; (3) explicit: applies interventions directly to content and skills; (4) strategic: helps students apply methods to guide their learning; (5) sequential: builds upon previous mastery; and (6) accountable: monitors effectiveness of instruction by evaluating students' progress frequently and systematically.

For students with disabilities, families and parents' roles in their education are more important than general learners. Blue-Banning, et al. (2004) established that for parents, showing respect includes viewing the child as a person not as a disability or label. Respect also incorporates courtesy. For school personnel, respect is accepting the family where they are in terms of dealing with the child's disability in a non-judgmental manner. When others do not treat families respectfully, school personnel feel that it causes a loss of empowerment and interferes with ability to access services. Also, Melamed & Reiman (2000) described an overview of the concepts underlying certain techniques collaborators and mediators use to resolve disputes between parents and educators, especially in the area of special education. Most families of students with disabilities need help to participate effectively in individual education program (IEP) meeting and in the resulting individualized programs. Buehler (as cited in Smith, & Tyler, 2010, p. 54) concluded some tips that teacher can give parents to help them better prepare to participate in IEP meeting as: tell them about students' strengths, report records regarding students' needs, ask for clarification, listen and compromise, and remain involved with the professionals on the IEP team.

Administration of the special education schools requires school principals who understands the philosophy and mission of special education and its intended outcomes. They must also well-versed in the management of learning in such school and how it is different from schools for normal children. When all the stakeholders of special education, namely, the principals, teachers, specialist, support personnel, and parents collaborate on the management of the special children's learning, it is likely that they will be successful in arriving at their intended outcomes – special learners who are self-sufficient within the scope of their disabilities (DiPaola & Walther-Thomas, 2003).

With this background in focus and in order to understand the components of a goal-oriented management of learning of special education schools, this research aimed to conduct the following study: (1) the conditions and problems of learning management in special education schools; (2) a development of a Learning Management Model for special education schools; and (3) evaluation of the Model.

## **Methodology**

To arrive at the goal of developing a Learning Management Model for special education schools, the researcher conducted the study in three phases, namely, the face-to-face interviews, a Focus group, and an evaluation of the finished Model. The samples, instruments and procedures for each phase were described as follows:

### **Phase I**

The samples for the first phase of the study were 32 administrators and teachers, 16 each, from 16 special education schools. The instrument of the study in this phase was a set of open-ended interview questions, designed to collect information regarding the existing conditions and problems in the following 10 areas of the learning management of special education: Policy and administration, Personnel, School work structure, Types of duties, Technology, Budget, Facilities, Equipment, Planning and projects, and Environment conducive to learning. Structured interviews were held face-to-face with the samples. Data concerning the conditions and problems the special educators encountered in their schools were qualitative in nature. They were taken into account and used as a basis to draw the first draft of the Model. The first draft was an attempt to draw a design of a learning management system containing components and elements that could alleviate current problems coupled with measures aiming at an enhancement of the management of learning in special education schools. The Model had three components, namely, Fundamental factors, Processes, and Products. The Fundamental factors component contained 6 sub-components, each sub-component included a certain number of directives or measures for that particular part, the number of which was indicated in the parentheses following its name: Policy and administration (8), Personnel (7), Budget (5), Technology (5), Equipment (5), and Facilities and environment conducive to learning (7). The Processes component contained four sub-components, each sub-component included a certain number of directives or measures for that particular part, the number of which was indicated in the parentheses following its name: Diagnosis of learners' impairments (6), Preparation of Individual Educational Plans (IEPs) (3), Instructional design (7), and Assessment of Learning (6). The Products component contained two sub-components, each sub-component included a certain number of directives or measures for that particular part, the number of which was indicated in the parentheses following its name: Learners (4) and Teachers (6).

### **Phase II**

In this phase, the first draft of the Learning Management Model for Special Education Schools were scrutinized in a Focus group with 15 stakeholders of special education, consisting of school administrators, teachers, special education specialists, and parents. Data from the scrutiny were used to refine the first draft into the second draft. Some substantial adjustments on the Model were made. A Manual for the implementation of the Model was also prepared in this phase.

### **Phase III**

The second draft of the Model, together with its Manual, were, then, evaluated by administrators and teachers of special education schools. The population of the study included in the third phase were 1,221 administrators and teachers from schools for the visually impaired children, schools for the hearing impaired children, schools for the cognitive impaired children, and schools for the physically impaired children. Using the stratified random sampling technique, 301 administrators and teachers from the fore-mentioned four groups of schools were selected as the samples of this phase.

The sample group was asked to evaluate the Model by responding to a 5-point Likert type scale. The evaluative items covered the three components of the Model – Fundamental Factors, Processes of Learning Management, and Products. The Fundamental Factors included six sub-components, each having different numbers of items as indicated in the parentheses: Policy and administration (7), Personnel (7), Budget (5), Technology (6), Equipment (5), and Facilities and environment conducive to learning (7). The Processes of Learning Management included four sub-components, each having different numbers of items as indicated in the

parentheses: Diagnosis of learners' impairments (12), Preparation of Individual Educational Plans (IEPs) (11), Instructional design (10), and Assessment of Learning (7). The Products included three sub-components, each having different numbers of items as indicated in the parentheses: Learners (10), Teachers (6), and Administrators (6).

The responses from the sample group and the finished Model were described in the next section.

## **Results and Discussion**

### **Result and Discussion of Phase I**

Interviews with administrators and teachers in the first phase of the study revealed how the existing learning in special education schools were managed and an assortment of problems arising from such management. These conditions and problems were grouped into three categories – Fundamental factors, Processes, and Products – as will be described further.

In terms of Fundamental factors, personnel had appropriate knowledge and skills in special education, but sometimes the work they were assigned was not in congruence with their qualifications. Personnel's negative attitudes toward change, lacks of self-discipline and difficulty in translating the school's learning management policy into practice also contributed to the problems. Assignment and delegation of responsibilities were unclear due to insufficient communication which, sometimes, resulted in having no definite work pattern. Regarding the use of technology, although schools were equipped with specialized technology for special needs children, teachers lacked the skills to properly operate them. Schools received sufficient budgetary support from the state and the private sector, but they were constrained by ambiguous directives in budget spending. Certain restrictions were imposed on the purchase of the materials and equipment. Some projects were hastily carried out without prior planning. The environment was only appropriate for specific type of special children. Darunee Uthairatanakit, et al (2002) and the Office of the National Primary Education Commission (2002) pointed out that lacks of school readiness in terms of facilities, materials, personnel, and curriculum led to ineffective educational management.

In terms of Processes, there was a need to assess the learners' potential and place them in an appropriate class environment. The curriculum and learning needed to be designed to fit the special education schools. The plan for learning was limited and the Individual Education Plans (IEPs) with elements tailored to meet the needs of each special learner were necessary. The schools used authentic evaluation methods. These findings were in congruence with NCSE (2006b, p.116) who recommended that effective individual education plans should be individualized and child-centered, inclusive, holistic, collaboration and accessible. Also, the assessment process should deliver information that can inform the process of students' individual learning paths in the school setting.

In terms of Products, the findings indicated that the learners had different characteristics and abilities to learn, both of which affected their attitudes toward learning. They also lack self-confidence and had difficulty adjusted socially. Teachers were burdened with many non-teaching responsibilities and these caused the lacks of motivation to teach, creativity, and self-development. Administrators subjectively evaluated the personnel's work performance. The system made the day-to-day operation difficult. Smith (2007) noted that when teachers were not ready to teach children with special needs, children would not be successful in the classroom.

## Result and Discussion of Phase II

The results from the Focus group indicated that the Model needed to be refined further, particularly, in its second and third components (Processes and Products). The first component – Fundamental factors – needed only a minor adjustment in the areas of Policy and administration and Technology. The Processes component needed substantial adjustments in Diagnosis of learners' impairments, and Preparation of IEPs; a moderate adjustment in Instructional design; and a minor adjustment in Assessment of learning. The substantial and moderate adjustments as mentioned reflected the views of the teachers and administrators concerning the importance of the process of learning management as the factors having major impact on the learning achievement of the special needs learners. It directly reflected their professionalism. One more sub-component was added to the third component (Products). The original draft covered only two sub-components – Learners and Teachers – but the Focus group insisted on including Administrators as the third sub-component. They reasoned that a good model of learning management should not only produce learners and teachers with desirable characteristics, but should also produce administrators with desirable characteristics since administrators are an indispensable part of the system.

## Result and Discussion of Phase III

The results of the evaluation of the Model by 301 administrators and teachers were reported in Tables 1-4. The sample group rated the Model as most appropriate for special education schools ( $\bar{x} = 4.66$ ,  $SD = .20$ ). The individual components of the Model were also rated as most appropriate in this order: (1) Products ( $\bar{x} = 4.78$ ,  $SD = .25$ ), Process of learning management ( $\bar{x} = 4.68$ ,  $SD = .23$ ), and Fundamental factors ( $\bar{x} = 4.53$ ,  $SD = .33$ ).

**Table 1:** Mean and Standard Deviation of Administrators and Teachers' Opinions on Learning Management Model for Special Education Schools

Learning Management in Special Education Schools	Mean	SD
Fundamental Factors	4.53	.33
Process	4.68	.23
Products	4.78	.25
<b>Overall average</b>	<b>4.66</b>	<b>.20</b>

Mean and standard deviation of each component of the Model were reported in Table 2-5.

**Table 2:** Mean and Standard Deviation of Administrators and Teachers' Opinions on Fundamental Factors of Learning Management Model for Special Education Schools

Fundamental Factors	Mean	SD
Policy and administration	4.52	.40
Personnel	4.61	.34
Budget	4.53	.41
Technology	4.53	.37
Material and equipment	4.48	.34
Facility and environment	4.52	.34

Table 2 showed that the fundamental factors component of the Model were rated as the most appropriate as follows: (1) Personnel ( $\bar{x} = 4.61$ ,  $SD = .34$ ), (2) Budget ( $\bar{x} = 4.53$ ,  $SD = .41$ ), (3) Technology ( $\bar{x} = 4.53$ ,  $SD = .37$ ), (4) Policy and administration ( $\bar{x} = 4.52$ ,  $SD = .40$ ),

and (5) Facility and environment ( $\bar{x} = 4.52$ ,  $SD = .34$ ); whereas, material and equipment was found as highly appropriate ( $\bar{x} = 4.48$ ,  $SD = .34$ ).

**Table 3:** Mean and Standard Deviation of Administrators and Teachers' Opinions on the Process of Learning Management Model for Special Education Schools

Process of learning management	Mean	SD
Student assessment	4.67	.30
Planning	4.67	.30
Learning design	4.69	.25
Evaluation	4.70	.26

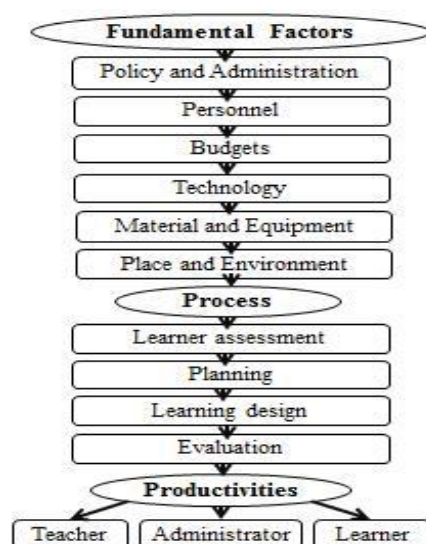
Table 3 showed that the processes component of the Model were found as most appropriate as follows: (1) evaluation ( $\bar{x} = 4.70$ ,  $SD = .26$ ), (2) learning management design ( $\bar{x} = 4.69$ ,  $SD = .25$ ), (3) environment management ( $\bar{x} = 4.67$ ,  $SD = .30$ ), and (4) planning ( $\bar{x} = 4.67$ ,  $SD = .30$ ).

**Table 4:** Mean and Standard Deviation of Administrators and Teachers' Opinions on the Products of Learning Management Model for Special Education Schools

Products	Mean	SD
Learners	4.74	.28
Teachers	4.80	.25
Administrators	4.80	.40

Table 4 showed that the three aspects of the products of the Model were rate as most appropriate as follows: (1) administrators ( $\bar{x} = 4.80$ ,  $SD = .40$ ); (2) learner ( $\bar{x} = 4.80$ ,  $SD = .25$ ); and (3) learners ( $\bar{x} = 4.74$ ,  $SD = .28$ ).

Figure 1 showed the finished Model of Learning Management for special education schools.



**Figure 1:** A Learning Management Model for Special Education Schools

Specific elements in each component and its sub-components that made the sample group accept the Model as appropriate were discussed below:

### **Fundamental Factors**

The following elements were listed: clear policy statement, fair delegation of responsibilities, congruency between types of work and qualifications of the persons responsible, transparent budgeting, clear process of budget implementation, provision for personnel to voice their opinions, encouragement of ICT production to enhance the teaching and learning and methods to use them effectively, clear plans for use of equipment, provision of database and search engine that meet the needs of the schools, improvement of the learning environments to support the diverse special needs and time of learning, and cooperation among administrators, personnel and parents.

### **Processes**

Assessment of students covers a range of strategies including observations of the students' behaviour and their nature, interaction between students and teachers, analysis of their language, evaluation of the learners in terms of their physical, emotional, social, and intellectual development, interviewing of parents to collect information regarding students' condition and readiness. A thorough planning of Individual Educational Plans (IEPs) are specified as mandatory based on the information from the fore-mentioned assessment, and in line with the needs of the special learners. Use of diverse and interesting teaching strategies are suggested, as well as involvements from parents in the review of their child's learning. Annual adjustment of the curriculum for the special needs learners – redefining the learning objectives, adjusting the content, reconsidering the methods of teaching and techniques, reorganizing the learning environment, and reconsidering the evaluation methods and instruments – is necessary. The listed elements are consistent with the views of Douglas, Traverse et al. (2012, p.121), in particular, their view about the importance of IEPs in the management of the learnings of the special needs students.

### **Product**

The implementation of the Model is expected to produce learners, teachers, and administrators with the following characteristics. Learners have the desirable characteristics in line with their specific disabilities, including physical, emotional, social and intellectual readiness, language use competence, ability to learn, problem-solving skills, adjustment, positive attitudes toward self and society, self-sustainment, at least within the scope of their own potential. Teachers have self-discipline, accountability, positive attitudes toward their own teaching and their students, systematic-work oriented, continuously updating themselves academically, ability to conduct classes innovatively. As the Council for Exceptional Children (2003) pointed out, special education teachers not only had to possess cognitive and academic skills but also the ability to understand the developmental course of special needs children in each grade level in order to be effective in their work. Administrators are required to have good governance, being leaders who have leadership, self-discipline, vision, are sincere, transparent and fair. As DiPaola & Walther-Thomas (2003) pointed out, the school principal is a key person in the collaborative effort at every school because they coordinate management efforts at their site and when principals and school leaders encourage success, understand the special needs of their students, and provide a supportive environment for teachers, everyone benefits.

### **Conclusion and Implication for Practice**

The result of this study confirmed the applicability of the Model in special education schools. These findings indicated that the management of learning in special education schools could be effective when all components of the system were considered in concert. The data gathered during the first two phases of the study which were used as the basis for the

development of the Model came from the people who are working in the field of special education. Their actual experiences expressed and offered during the interviews and the Focus group helped shape the Model into its final version, as evident from the eventual acceptance of the Model and being rated as highly appropriate for use in special education schools by another group of administrators and teachers.

In applying this Model to any particular special education school, the school itself should first make an assessment of the existing condition to see which component and/or elements are already present and which are still lacking, and make the adjustment accordingly.

The study also has implications for institutions of higher learning which provide training for special education teachers, administrators, and specialists. Close examination of each component of the Model should be analysed and discussed during the course of the study in order to give the trainees a thorough insight into the rationales behind the inclusion of each component in the Model.

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# Social Engagement Activities in De La Salle University-Dasmariñas

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## Abstract

De La Salle University-Dasmariñas (DLSUD) is serious in the performance of its tri-focal task of instruction, research and community service. It has ensured that these tasks are performed not only within the confines of the campus but goes beyond its boundaries. It has expanded its social engagement activities to benefit not only its students and faculty, but also its partner institutions, companies, industries, and communities.

This study looked into the social engagement activities of the seven (7) colleges in DLSUD and the effects of such engagement. Recommendations were also sought from the respondents with regard to the improvement of the present activities undertaken by the different colleges, thereby increasing the benefits derived from such.

Through a matrix prepared for this purpose, the respondents were asked to list down their local and international partners, the type of activities undertaken, their effects/benefits, and recommendations for the improvement of such partnership.

Generally, DLSUD has a good number of local and international partners with varied activities geared towards the improvement of instruction, collaboration in research, and sustainability of community service.

**Keywords:** Instruction, Research, Community Service, Social Engagement, Partnership

## Introduction

Higher education institutions (HEIs) are tasked to perform the tri-focal function of instruction, research and community service. Instruction is the action, practice, or profession of teaching (<http://www.merriam-webster.com>). It is vital for education, as it is the transfer of learning from one person to another (<https://www.vocabulary.com>). The quality of the teaching and learning process determines the quality of instruction provided by the HEI. Research is the diligent and systematic inquiry or investigation into a subject in order to discover or revise facts, theories, applications, etc. (<http://www.dictionary.com>).

In the broadest sense of the word, the definition of research includes any gathering of data, information and facts for the advancement of knowledge (<https://explorable.com>). An HEI is required to undertake research in order to contribute to the pool of human knowledge. Community service, on the other hand, refers to the services volunteered by individuals or an organization to benefit a community or its institutions (<http://www.thefreedictionary.com>). It also refers to a service that a person performs for the benefit of his/her local community. It is a service external to the school (<http://www.trinityvalley school.org>). Community service completes the tri-focal function of an HEI since the beneficiary of its quality instruction and research activities should be the community it serves.

De La Salle University-Dasmariñas (DLSUD) is one of the HEIs in the Philippines committed to the performance of its tri-focal task of instruction, research and community service. As part of its vision-mission, the University shall strive to become a leading institution nationally and globally in the integral formation of the youth by offering relevant, responsive and community-oriented academic programs, research and extension services.

To realize its vision-mission, the university has social engagement activities related to instruction, research and community service. It has its Memorandum of Agreement (MOA) or understanding (MOU) with its partner institutions as it promotes academic cooperation, research and exchange for the mutual benefit of the two parties. Generally, the activities covered by the agreement are as follows: exchange of scholars and researchers; coordination of activities such as joint research, lecture, seminar, workshop, symposium and the like; exchange of data, documentation, and research materials in fields of mutual interest; offering of academic, special or non-degree programs; exchange of students; and exchange of faculty members. The MOA or MOU normally covers instructional and research activities. For its community service, the university has a separate agreement with its partner communities.

The social engagement activities done by DLSUD is related to the general concept of engagement that covers consultation, extension, communication, education, public participation, participative democracy or working in partnership (<http://www.dse.vic.gov.au/effective-engagement/introduction-to-engagement/what-is-community-engagement>). It is believed that effective engagement is a vehicle that can be used to build more resilient relationships with community.

Social engagement might be seen as a similar term to public engagement but with a greater element of equity between partners and social justice. This may refer to the general relationship between a university and the people external to it. It relates to an educative relationship whereby universities are sharing their knowledge with the public (<http://about.brighton.ac.uk/Socialengagementstrategyfinal090909.pdf>).

As a core value, engagement implies strenuous thoughtful argumentative interaction with the non-university world in at least four spheres: setting universities' aims, purposes and priorities; relating teaching and learning to the wider world; the back-and-forth dialogue between researchers and practitioners; and taking on wider responsibilities as neighbors and citizens (ACU, 2001).

Social engagement may result to long term partnerships for mutual benefit, enhanced teaching, research and personal development of students and staff, and the increasing availability of the university's resources (intellectual and physical) to its local communities (<http://about.brighton.ac.uk/Socialengagementstrategyfinal090909.pdf>).

Brown and Isaacs (1994) have developed the Six 'C's model as a set of basic principles to guide any engagement planning process: Capability – the members are capable of dialogue; Commitment – there is mutual benefit beyond self-interest; Contribution – members volunteer and there is an environment that encourages members to 'have a go' or take responsibility/risks; Continuity - members share or rotate roles and, as members move on, there is a transition process that sustains and maintains the community corporate memory; Collaboration – there is reliable interdependence, a clear vision with members operating in an environment of sharing and trust; and Conscience – this embodies or invokes the guiding principles/ethics of service, trust and respect that are expressed in the actions of the community. These basic principles

should be present to make the engagement successful. Generally, these principles are reflected in the process followed by the HEI in entering into an engagement activity and in the provisions of the MOA/MOU used for this purpose. Visits to the intended partners are usually done by the HEI where exploratory talks are made on the nature, scope and length of the engagement, the responsibilities of the two parties and the benefits to be derived from such. Possibilities for renewal are also included in the MOA/MOU after proper evaluation has been made.

This paper was done to discuss the specific social engagement activities done by the seven colleges of DLSUD in relation to instruction, research and community service.

Specifically, the following questions were answered in this study:

- 1) What are the social engagement activities done by DLSUD in relation to instruction, research and community service and what benefits are derived from such engagements?
- 2) What recommendations can be given to sustain such engagements?

Through a matrix prepared for this purpose, the college deans were asked to list down their local and international partners, the type of activities undertaken, their effects/benefits, and their recommendations for the expansion of such partnership.

## Results and Discussion

**Problem 1:** What are the social engagement activities done by DLSUD in relation to instruction, research and community service and what benefits are derived from such engagements?

**Table 1:** Social Engagement Activities Related to Instruction

Activity	Inter-national Partner	Local Partner	Benefits
Practicum/Internship/immersion	6	149	<ul style="list-style-type: none"> <li>• Field experience and training of students</li> <li>• Program enrichment</li> <li>• Student exposure to different work settings</li> <li>• Knowledge and skills enhancement of students</li> <li>• Preparation for board examinations</li> <li>• Cultural exposure</li> </ul>
Joint conference/symposium/lecture	6	2	<ul style="list-style-type: none"> <li>• Degree program enrichment</li> <li>• Update in current information and trends in the field</li> <li>• Faculty exposure</li> <li>• Student exposure</li> <li>• Cultural exposure</li> </ul>
Consortium in offering degree programs		3	<ul style="list-style-type: none"> <li>• Increase in enrollment</li> <li>• Development of more technical skills among students</li> </ul>

Activity	Inter-national Partner	Local Partner	Benefits
			• Additional link with industry practitioners
Faculty visit	1	2	• Faculty exposure • Cultural exposure
Visiting trainers/professors/faculty exchange	3		• Faculty exposure
Student visit	1	2	• Expansion of practicum sites • Cultural exposure
Student exchange	2		• Credit transfer • Student exposure
English language program	1		• Income generation
Integration of certain softwares to specific subject areas		4	• Hands-on experience of students
Subscription of magazines as learning materials		2	<input type="checkbox"/> Access to up-to-date industry trends and information
Certification examinations		3	<input type="checkbox"/> Upgrade of standards in instruction to meet industry requirements
			<input type="checkbox"/> Sponsorship for faculty in taking the examination
			<input type="checkbox"/> Support for students through “Pass Now, Pay Later” program
			<input type="checkbox"/> Student exposure on necessary skills for the field
Review classes for board examinations		1	<input type="checkbox"/> Better performance in board examinations
Joint business project preparation		1	<input type="checkbox"/> Practical training and experience
Skills training for students		1	<input type="checkbox"/> Skills development of students
			<input type="checkbox"/> Students’ edge in their future industry practice
Training the trainers program		1	<input type="checkbox"/> Updating of faculty competence

Table 1 shows the social engagement activities of DLSUD in relation to instruction. It can be noted in the table that most of the efforts of the university is focused on practicum/internship/ immersion activities of their students with 6 international and 149 local partners. This is seen as an avenue where students can have field experience and training, where they can be exposed to different work settings, where they can enhance their knowledge and skills, and where they can prepare for their board examinations as they learn from experience. As the students do their on-the-job training, they become acquainted with their future work environment and are exposed to different cultures as they do their internship abroad. Aside from the direct benefits to the students, this is also beneficial to the university because it can help in the enrichment of the program through the feedback given by the supervisors that can be incorporated in the curriculum revision. This is similar with the findings of Zabale and Macamo (2016) and Ishengoma and Vaaland (2016) that university-industry linkage increases the opportunities of internship for students in the industry partners of the university.

The university also gives importance to the holding of joint conferences, symposia and/or lectures with its 6 international and 2 local partners. This activity exposes both faculty

and students with current information and trends in their respective fields, aside from cultural exposure. This also helps in the enrichment of the degree programs offered by the university.

The university is also in consortium with 3 local partners in offering degree programs. Aside from the increase in enrollment, this partnership provides for the further development of the technical skills of the students. Likewise, the partner universities of DLSUD allows them the opportunity to link with their partner industry and with the industry practitioners.

It can also be seen from the table that aside from the specific activities for faculty and students like exchange programs and school visits, DLSUD has local partners that help in the improvement of its instructional services like the provision of softwares integrated in specific subject areas that provides the students with hands-on experiences, subscription of magazines that offers up-to-date industry trends and information, preparation of joint business projects for the students' practical training and experience, and preparation for certification and board examinations.

**Table 2:** Social Engagement Activities Related to Research

Activity	Inter-national Partner	Local Partner	Benefits
Research collaboration	3	10	<ul style="list-style-type: none"> <li>• Increase in the number of faculty doing research</li> <li>• Faculty exposure</li> <li>• Technical training</li> <li>• Increase in the number of publications</li> </ul>
Journal publication	2	9	<ul style="list-style-type: none"> <li>• Increase in the number of publications</li> <li>• Technical training in writing publishable articles</li> </ul>
Exchange of research materials, publications and other scientific information		4	<ul style="list-style-type: none"> <li>• Update in research</li> </ul>
Paper presentation		4	<ul style="list-style-type: none"> <li>• Increase in the number of faculty presenting their research results</li> </ul>
Student exchange		4	<ul style="list-style-type: none"> <li>• Exchange of expertise</li> <li>• Student exposure</li> <li>• Collaboration in the use of research facilities</li> </ul>
Faculty exchange		4	<ul style="list-style-type: none"> <li>• Exchange of expertise</li> <li>• Faculty exposure</li> <li>• Collaboration in the use of research facilities</li> </ul>
Research seminars		3	<ul style="list-style-type: none"> <li>• Update in research</li> <li>• Exposure to research endeavors</li> </ul>
Faculty immersion		3	<ul style="list-style-type: none"> <li>• Development of modules</li> <li>• Curriculum/syllabus enhancement</li> <li>• Project development</li> </ul>

The social engagement activities related to research being undertaken by the university are shown in Table 2. On top of the list is the research collaboration of DLSUD with 3 international and 10 local partners. This results to an increase in the number of faculty doing

research, thereby producing articles for publications. It provides them with technical training as they are exposed to different research activities. This is related to the second activity, journal publication, being entered into by the university with 2 international and 9 local partners. As the faculty members are given technical training in writing publishable articles, there is an increase in the number of their publications. This is related to what Yang and Heo (2014) stated that research collaboration that promotes cross-disciplinary group research activities can be successful.

There are other research engagement activities done by DLSUD like exchange of research materials, faculty and student exchange, paper presentations and research seminars. All these help in the further development of the research skills of both faculty and students that can lead to an increase in their research productivity. Another activity being engaged in by the faculty is the immersion program in their partner companies. This is important since the faculty is required to develop a module by the end of the immersion, which can be used in the delivery of their lessons in the classroom. It is also a requirement of the immersion program that a joint project be developed by the university and the industry. The immersion activity is a clear manifestation of a collaborative activity between the university and the industry, which is reflected in the work of Ramos-Vielba and Fernandez-Esquinas (2012) that participation of a research team in the collaborative activity can take the form of training and transfer of personnel and R&D activities.

**Table 3:** Social Engagement Activities Related to Community Service

Activity	Inter-national Partner	Local Partner	Benefits
Participation in meetings and conferences		1	• Sharing of best practices
Involvement in conservation programs like tree-planting and coastal clean up		1	• Faculty exposure to community issues
Research activities		1	• Additional research laboratory/field site
Free seminars for teachers		1	• Enhancement of delivery/facilitation skill of DLSUD faculty • Update in the knowledge and skills of the recipients
Feeding program		1	• Faculty exposure to community issues
Skills training	2	3	• Update in the knowledge and skills of the recipients
Gift-giving/cash donation		3	• Faculty exposure to community issues • Expansion of network • Provision of help in the operation of the recipient center
Psychological services		2	• Faculty practice
Livelihood project		1	• Development of skills of the recipients
Engineering and architectural works for school development			• Actual practice of faculty and students
School supervision/consultancy		2	• Improvement in the operations of the school recipients
Catechetical apostolate		5	• Formation of catechists • Teaching basic catechism
Non-formal education given to		1	• Help given to the students to pass the

out-of-school-youth			accreditation examination
Scholarship program		2	• Help given to the poor but deserving students to finish schooling

Table 3 shows the social engagement activities of DLSUD related to community service. Since this paper covers the activities done by the colleges in DLSUD, most of the items listed here are education-related like giving seminars, skills training, research activities, catechetical activities, scholarship programs, school supervision and application of skills (psychological, engineering and architectural).

It can be noticed that the university has only 2 international partners in the area of giving skills training to external recipients. All the other activities done by the university are done with local partners. These activities are not only beneficial to the community recipients as they are provided with skills and other necessary help but benefits are also reaped by the members of DLSUD community. As the faculty and students become exposed to the different community issues, they also develop the value of social responsibility which can be applied not only in the classrooms and in their partner communities but also in their general relationship with others.

In these social engagement activities related to instruction, research and community service, DLSUD used Brown and Isaac's Six C's model. As the University engaged with its different partner institutions, it entered into a dialogue or an agreement with its partners through its MOA or MOU (capability, continuity and conscience) which brought mutual benefits to both parties (commitment), and where certain responsibilities and tasks were assigned (contribution and collaboration). These activities allowed the engagement between the two parties to prosper, as evidenced by the regular renewal of the MOAs and MOUs.

**Problem 2:** What recommendations can be given to sustain such engagements?

Analyzing the list of recommendations given by the college deans on how they can further improve the program or the activities they have with their partners, it is worthy to note that the colleges are aware of the weaknesses in their social engagements. The common factors mentioned for the weaknesses in their engagement activities are budget, time and facilities. Although they would like to send more faculty and students in their partner institutions/companies either for instruction or research and vice versa, they need a bigger budget to make this exchange possible. Time is also one of the factors mentioned since the academic calendar of DLSUD is different from its counterparts. To address this concern, the university changed its opening of classes to August. It is assumed that with the same school calendar, DLSUD will not find it difficult to send faculty and students to its partner educational institutions. Another thing that has to be improved is the set of facilities in campus. For example, if DLSUD is intent on increasing the number of faculty and students that it will accept for exchange programs or even short visits, it lacks the dormitory where the visitors can be accommodated. If DLSUD also aims to strengthen the skills development of its students related to their specific fields, there is a need to provide the necessary laboratories for hands-on application.

Another recommendation mentioned for instruction and research is to explore opportunities for linkage and networking with other countries in Asia and Europe, as well as to expand the areas of collaboration.

In terms of community service, there is also a need for an additional budget that will be used to sustain the extension activities. It is also recommended that a more concrete program be created to make it more sustainable.

## **Conclusions and Recommendations**

This study looked into the social engagement activities of the seven colleges of DLSUD in relation to instruction, research and community service. From the data gathered, it can be concluded that the university has a good linkage with international and local partners that involve its faculty and students. These engagements result to certain benefits both for the university and its partners.

Most of the engagements of the university in relation to instruction are focused on practicum/internship/immersion activities of their students where these students can have field experience and training, where they can be exposed to different work settings, where they can enhance their knowledge and skills, and where they can prepare for their board examinations. This is also a good venue for the enrichment of the program through the feedback given by the supervisors that can be incorporated in the curriculum revision.

In terms of research, majority of the activities are centered on research collaboration and journal publication, which are good indications to increase the research productivity in the University.

In relation to community service, majority of the activities are education-related like giving seminars, skills training, research activities, catechetical activities, scholarship programs, school supervision and skills application. These exposures help DLSUD faculty and students to develop the value of social responsibility.

To further improve these engagements, the University has to allot more budget for these activities, synchronize its calendar with its partner institutions, improve its facilities to accommodate the varied activities that it has planned with its partners, and prepare a more concrete program for engagement.

All in all, DLSUD is committed to improve its social engagement activities to expand its network and become a leading institution nationally and globally.

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# **MOOC Camp: Building Community and Continuing Professional Development**

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## **Abstract**

This study aimed to determine the efficacy of Massive Open Online Course (MOOC) camp in the Philippines in building community and continuing professional development. The researchers employed the descriptive method of research. The main data-gathering tool used in the study was validated self-made survey questionnaire. The participants of this study were 50 experienced MOOCers who attended MOOC camp in Mandaluyong City, Philippines. The data gathered were treated statistically using mean and Pearson R for the significant relationship between the demographic profile to the benefits of MOOC camp. Interviews were also conducted to gather more in-depth information to validate the quantitative data gathered from the survey questionnaire. Findings in the study revealed that many young professionals in their twenties are more concentrated and focused in their career wherein majority of them are women. The study also presented that MOOC camp is significant in building community, professional growth and career development, therefore MOOC is impactful if there is MOOC camp. It also showed that learners were satisfied in the activities MOOC camp provided and it was beneficial to them. Aside from getting the higher chance in completing the online course through MOOC camp the participants also are well motivated to help the community and themselves. MOOC camp can be a very good tool promoting Massive Open Online Course.

**Keywords:** Massive Open Online Course, MOOC Camp, Building Community, Professional Development

## **Introduction**

The continuous demand of the 21st-century learners opens the door for Massive Open Online Course(s) in different Universities abroad. The University of Melbourne's Graduate School of Education (MGSE) has launched a Massive Open Online Course – or MOOC – on how to give school children the skills to survive in a world of ever-changing technology ("Massive Classroom Opens Door," 2014). In Dublin, the Minister and Education and Skills launched a new Massive Open Online Course called "21ST Century Learning Design" which will be used by teachers across the globe to help support the objective of bringing more technology skills into the classroom (Microsoft Europe, 2016). It became one of the newest ideas of education designed for extended learning and career development. MOOC is an interactive step-by-step course aimed at reaching an unlimited number of participants worldwide to create a community of lifelong learners (What is MOOC?). It allows people from the different region to access and study courses in their preferred universities. It is also a means of an empowering learning community and exchanging culture because the learners are capable of interacting with other people using different platforms like coursera, edX, canvas and etc.

The popularity of MOOC worldwide has reached the Philippines. In 2013, the first MOOC in the country was offered by University of the Philippines Open University (UPOU) in cooperation with wireless leader Smart Communication, Inc. (“Phl 1st massive open,” 2013). This became the latest trend of education in continuing professional development. The Philippines, among ASEAN countries, has been very active in studying MOOC program. Despite many challenges, they were able to produce the most number of participants successful in MOOC. Shaping the Way We Teach 1 and 2 were some of the courses that became eminent especially to teachers participating MOOC. These courses are hosted by the U.S.

Department of State’s Office of English Language Programs in the Bureau of Educational and Cultural Affairs (Education and Exchanges program, US Embassy Manila Philippines). Through MOOC camp, offline meet-ups, thousands of participants around the Philippines successfully completed the course. As stated by the U.S Department of States Bureau of Educational and Cultural Affairs, MOOC Camp are most successful with weekly meetings. The increasing demand of learning through Massive Open Online Course would be more effective when there is camp (Fournier et. al., 2014). In an open learning environment, the control of learning no longer rests with an educational institution but with the learners themselves. In this case, the success of a learner through MOOCs rely mainly on his own motivation, therefore makes it as a Self-Directed Learning. However, MOOC camp helps the learner motivates himself to finish the course because people with shared vision surround them (Milligan et. al., 2013). When people learn through social knowledge, they collaboratively develop new knowledge artifacts and products. People learn by both drawing on and, at the same time, contributing to collective knowledge.

So, ‘connecting’ is only one of the series of actions learners have to take to learn in open, unstructured networks.

Researchers have already experienced to become the student of MOOC and Facilitator of MOOC camp. They believed that being part of this program, individual can automatically be part in building community and continuing professional development. However, the researchers believe that individual is well positioned to help himself to be a better person with the skills needed. This motivated the authors to conduct this study which focused on the efficacy of MOOC Camp in the Philippines. It discusses how it builds community and how it helps individual on their professional development.

## **Statement of the Problem**

The purpose of this study was to determine how Massive Open Online Courses relate to the professional growth, community development and career achievement of the participants of MOOC.

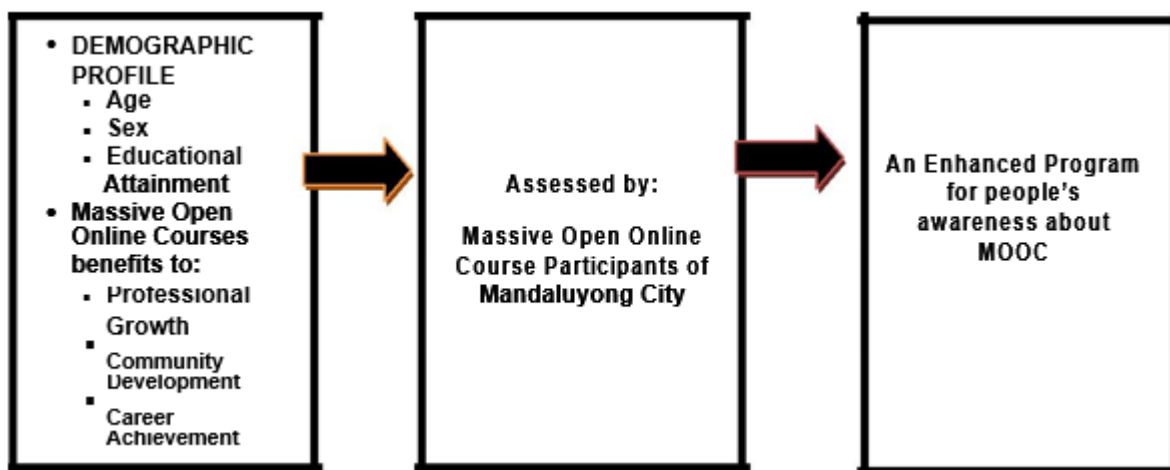
Specifically, this study addressed the following questions:

1. What is the demographic profile of the respondents in terms of
  - a. Age;
  - b. Gender; and
  - c. Educational Attainment?
2. What is the MOOC’s Camp benefit in terms of:
  - a. Professional growth;
  - b. Community development; and

- c. Career achievement?
3. Is there a significant relationship between the MOOC's benefits such as professional growth, community development and career achievement to the demographic profile of the participants?
4. Based on the findings, what program can be proposed to enhance the awareness of the people about MOOC?

## Paradigm of the Study

The input includes the demographic profile of the respondents such as: age, sex and educational attainment and MOOC variables such as: professional growth, community development and career achievement. The processed was to test the relationship between MOOC and its variables such as: professional growth, community development and career achievement. The output was enhanced MOOC Camp Curriculum.



**Figure 1: Paradigm of the Study**

## Methodology and Research Design

This study utilized the descriptive method of research to determine how Massive Open Online Course Camp relate to the professional growth, community development and career achievement of the participants of MOOC. The respondents of this study were the 50 participants of the Massive Open Online Course (MOOC) campers of Mandaluyong City. The survey dealt with the benefits of MOOC camp to their professional growth, community development and career achievement to have an enhanced program for people's awareness about MOOC.

A survey questionnaire was the main data gathering instrument. The research questionnaire was composed of two sets. The first set was the Participants Information Sheet. It covered the demographic information of the respondents such as age, gender and educational attainment. The second set dealt on the level of benefits of MOOC Camp to their professional growth, community development and career achievement.

For items on the level of benefits of MOOC Camp to their professional growth, community development and career achievement, the weighted points, score range and verbal interpretation are as follows:

**Table 1:** Scale Used in the Study (Likert Scale)

Scale	Range	Verbal Interpretation
5	4.21 to 5.00	Always or almost always true
4	3.41 to 4.20	Generally true
3	2.61 to 3.40	Somewhat true
2	1.81 to 2.60	Generally not true
1	1.00 to 1.80	Never or almost never true

## Result and Discussion

**Problem 1:** What is the demographic profile of the respondents in terms of age; se; and educational attainment?

**Table 2:** Demographic Profile of MOOCers in Mandaluyong City According to Age.

AGE	FREQUENCY	PERCENTAGE
16 - 20	4	8.00
21 - 25	12	24.00
26 - 30	10	20.00
31 - 35	10	20.00
36 - 40	6	12.00
41 and above	8	16.00

Table 2 shows the age of the participants attending MOOC camp. The result shows that 12 or 24% of the participants' age between 21-25 followed by ages between 26-30 and 31-35 years old both with 10 participants 20% of the total number of participants. However, there are 8 participants or 16% with the age of 41 years and above. It indicates that the most of the participants attending MOOC camp are within the range of 16 to 35 years of age.

**Table 3:** Demographic Profile of MOOCers in Mandaluyong City According to Gender

GENDER	FREQUENCY	PERCENTAGE
Male	16	32.00
Female	34	68.00

Table 3 shows the demographic profile of MOOCers in Mandaluyong City according to gender. Finding shows that among 50 respondents of MOOC camp, 34 or 68 % of them are female and only 16 or 32% are male. This shows that there are more women who engaged in MOOC camp for their career development and community development.

**Table 4:** Demographic Profile of MOOCers in Mandaluyong City According to Educational Attainment.

EDUCATIONAL ATTAINMENT	FREQUENCY	PERCENTAGE
College Level / Graduate	19	38.00
MA Units / Graduate	22	44.00
Doctoral Units / Graduate	9	18.00

Table 4 presents the educational attainment of MOOCers whereas 22 or 44% of the MOOCers gained Masters Unit or Degree, 19 or 38% of the course takers are under college level and 9 or 18% of them have doctorate units or degree. It points out that professionals are seeking for a new way of helping themselves develop their career and helping the community through MOOC camp. In addition, even a person attains the highest degree of education they urge for more to fully develop themselves as an individual and as a professional

**Problem 2:** What is the MOOC Camp benefit in terms of professional growth, community development and career achievement?

**Table 5:** Benefits of MOOC Camp in Terms of Professional Growth.

A. PROFESSIONAL GROWTH	Mean	Verbal Interpretation
1 MOOC camp is dedicated to my career . development.	4.50	Always or almost always true
2 The camp workshops are well planned, effective . and interactive which allow learning and practicing new concepts.	4.52	Always or almost always true
3 MOOC content and strategies are very useful in . my work.	4.36	Generally, true
4 . MOOC helps me learn new information and skills which gain opportunities for professional growth.	4.58	Always or almost always true
5 . I am satisfied with the activities MOOC offered in training and education.	4.50	Always or almost always true
6 I am satisfied that I have the opportunities to . apply my talents and expertise.	4.40	Generally true
<b>OVERALL MEAN</b>	<b>4.48</b>	<b>Always or almost always true</b>

Table 5 shows the benefits of MOOC's in terms of professional Growth. Finding shows that the participants believed that MOOC has benefits in their professional growth having an overall mean of 4.48 with a verbal interpretation of Always or Almost Always True. Among the items, participants said that

MOOC helps them learn new information and skills which gain opportunities for professional growth with a mean of 4.58 followed by MOOC workshops are well planned,

effective and interactive which allow learning and practicing new concepts having a mean of 4.52. It expresses that majority of them agree that MOOC camp is designed to help them build their career. Parallel to the studies of Bowon et. al. (2015), MOOC and MOOC camp promotes a framework of lifelong learning.

**Table 6:** Benefits of MOOC's in Terms of Community Development

<b>B. COMMUNITY DEVELOPMENT</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
1 MOOC camp gives me an idea on how to help . my community as an individual.	4.20	Generally true
2 . MOOC camp allows me to gain new friends and collaborate with others.	4.50	Always or almost always true
3 Many of my friends are encouraged to join . MOOC camp since they find it very useful.	4.30	Generally true
4 . MOOC camp gives me an opportunity to access practical resources that can help me to improve my community.	4.42	Generally true
5 MOOC camp gives me the opportunity to . network with other similar groups.	4.44	Generally true
6 . Through MOOC camp, I can involve myself to community engagement by training and serving others.	4.32	Generally true
<b>OVERALL MEAN</b>	<b>4.36</b>	<b>Generally true</b>

Table 6 shows the benefits of MOOC's in terms of community development. Finding shows that the participants believed that MOOC has a benefit in the community development having an overall mean of 4.36 with a verbal interpretation of Generally True. Among the items, participants said that MOOC camp allows them to gain new friends and collaborate with others with a mean of 4.50 followed by MOOC gives them the opportunity to network with other similar groups having a mean of 4.44. Result also shows that most of the participants were encourage to join because of the usefulness of the program to their lives.

This result coincides on the presentation of Mrs. Rebecca Sagot during the TESOL 2016 at Baltimore Maryland. According to her, "to be successful in MOOC, we must conduct MOOC camps, identify the allies, leaders and resources, conduct meet-ups, form learning actions, cultivate mentors, keep the graduates engage, celebrate learning and pass it on." In Davao Del Norte, Philippines, English teachers took Shaping the Way We Teach English 1 and 2 offered by University of Oregon wherein there were three batches of MOOC camps. During the first batch of camp, there was a 75% completion rate for the first course and 100% completion rate on the second course. Moreover, 98% and 97% were the completion rate for the second batch of Shaping the Way We Teach English 1 and 2. In addition, during the third batch of MOOC camp, there were 99% and 98.56% completion rate of the two courses. This

clearly shows that the teachers are motivated and interested to study and finish the course when they are involved in a group activity.

**Table 7:** Benefits of MOOC camp in Terms of Career Achievement

<b>C. CAREER ACHIEVEMENT</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
1.MOOC's certification help me advanced my career application.	4.50	Always or almost always true
2. MOOC helps me better understand the nature of my work.	4.52	Always or almost always true
3. MOOC gives me the confidence in and outside my workplace.	4.36	Generally true

<b>C. CAREER ACHIEVEMENT</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
4 MOOC allows me to become an immediate asset . to my workplace.	4.58	Always or almost always true
5 MOOC helps me develop my skills and advance . my knowledge towards my career.	4.50	Always or almost always true
6 MOOC gives me the capability to inspire others . by recognizing, developing, and applying their talents to reach their goal.	4.40	Generally true
<b>OVERALL MEAN</b>	<b>4.36</b>	<b>Generally true</b>

Table 7 shows the benefits of MOOC's in terms of career achievement. Finding shows that the participants believed that MOOC has a benefits in their career achievement having an overall mean of 4.36 with a verbal interpretation of Generally True. Among the items, participants said that MOOC allows them to become an immediate asset to my workplace with a mean of 4.58 followed by MOOC helps them better understand the nature of my work with a mean of 4.52. According to the unstructured interviews conducted by the researchers many of the participants used the certification in their application process and they found it very helpful since it gives them the edge among other applicants.

**Problem 3:** Is there a significant relationship of the MOOC's benefits which are Professional Growth, Community Development and Career Achievement to their Demographic Profile in terms of age, gender and educational attainment?

**Table 8:** Pearson r Test on MOOC's Benefits in Terms of their Demographic Profile.

MOOC Camp Benefits	Pearson R		
	AGE	GENDER	EDUCATIONAL ATTAINMENT
Professional Growth	0.02718	1	-0.52745
Community Development	0.68135	-1	-0.78343
Career Achievement	-0.07292	-1	-0.05396

Table 8 shows the Pearson r Test on MOOC's benefits in the Professional Growth, Community Development and Career Achievement in terms of their Age, Gender and Educational Attainment. Result shows that there is a weak and moderate positive significant relationship of the MOOC benefits in Professional Growth and Community Development with a value of 0.02718 and 0.68135 respectively to their Age. However, there is a weak negative significant relationship of MOOC benefit in Career Achievement with a value of -0.07292 to their Age. With regard to Gender, there is a perfect positive relationship of MOOC benefit in professional growth to their gender while there is a perfect negative relationship of MOOC benefit in community development and career achievement to their gender. Lastly, all the MOOC benefits have a negative significant relationship to their educational attainment.

Problem 4: What program can be proposed to enhance the awareness of the people about MOOC?

The result of the study revealed that MOOC camp is essential for an individual's professional growth, community development and career achievement. The researchers proposed the following to enhance the awareness of the people about MOOC and MOOC camp.

- A. Collaboration of Organizations. Different organizations such as RELO (Regional English Language Office in Manila) and British Council support and promote MOOC and MOOC camps, the Department of Education can work together with these organizations to raise awareness among interested students in taking courses that is suitable for their need. The effectivity of MOOC camp was seen in Davao Region, led by Ms. Rebecca Sagot who is working under Department of Education in Davao wherein part of teacher's curricular activities is take MOOC and join MOOC camp. If MOOC and MOOC camp will be part of Department of Education in the Philippines nationwide it can produce more successful graduates in open education.
- B. Celebration of Learning. It is a must have after finishing the course as a reward for those student who completed the program. A simple graduation or recognition program will boost students' interest in taking MOOC and attending MOOC camp.
- C. Social Media Campaign. Group page, and other form of social media greatly help the promotion of MOOC and MOOC camp. With the help of MOOC facilitator posting about MOOC and MOOC camp many are encourage to take MOOC courses.

## Conclusion and Recommendation

Based on the result of the study, it showed that many professionals are eager and motivated to learn new ways of developing themselves. Most of these professionals are characterized by women in our society. MOOC as a new tool of learning must be supported by MOOC camp, this camp is highly significant in developing one's professional growth, community and career. The study recommends that the Department of Education must work with different organizations to raise more awareness of MOOC and MOOC camp. Celebration of learning as a reward is also commendable as it increases student's eagerness in joining the program. Further and more in-depth studies on MOOC camp can be done to support the effectiveness of MOOC camp in the Philippines.

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# Relationship between Free Voluntary Reading and Scientific Literacy of Students in a Bilingual Context, Thailand

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## Abstract

The aim of this study was to find out if there were any differences in scientific literacy test scores between third-year pre-cadets students who participated in a free voluntary reading (FVR) experiment (Krashen, 1993) and those pre-cadets who did not participate. The study was carried out in 2015 at the Armed Forces Academies Preparatory School (AFAPS) in Thailand for over a six-week period.

The participants were third-year class pre-cadets (grade twelve students), 32 pre-cadets in each class. One of the classes was assigned to be the experimental group and the other became the control group. Both classes were similar in terms of gender (all students were male) and in achievement scores in science.

The instrument for data collection was an adaptation of the science achievement test of the Program for International Student Assessment program (PISA). The test consisted of forty questions. It was administered to both groups before the experiment began, and 6-weeks later. Individual test scores were compared to determine whether the scores of the students who participated in the FVR program achieved higher scores on the post test than the control group.

The comparison showed the mean (  $\bar{x}$  ) difference in post-test results was 3.88. A test of significance showed that the achievement level of the experimental group was significantly higher than the control group. The difference was significant ( $p= 0.00$ ), meaning that the FVR program appears to have been a factor in enhancing the third-year class pre-cadets' scientific literacy test scores.

It is recommended that future research should be carried out to investigate the effectiveness of FVR for other academic subjects, not only in schools such as the Armed Forces Preparatory Schools, but also in ordinary schools, colleges, and universities in Thailand.

**Keywords:** Free Voluntary Reading, Scientific Literacy, Bilingual, Students

## Introduction

In the 21st century, schools should be preparing students to the new and rapidly changing global environment (Clarke, 2014). That evokes the need for national system to undertake reforms. In Thailand, the 1999 National Education Act attempt to strengthen the human resources and support overall development of the Thai people (Office of the Education Council, 2007).

English and Science are the essential content for the 21st learners especially pre-cadets who study at the Armed Forces Academies Preparatory School (AFAPS) which is the only institution to admit selected students who are trained to become commissioned officers.

Science content is not only the device that they can use in their career. The scientific process and scientific reasoning in investigation for seeking knowledge and problem-solving, known as scientific literacy, can also help them complete their missions perfectly.

English is an important language and declared as the sole official working language of the Association of Southeast Asian Nations (ASEAN). The increased use of English in a globalized world, and the trend of using English as a medium of instruction in Southeast Asia are significantly increasing (Kirkpatrick, 2008, 2011, & 2012). Moreover, Thailand joined the ASEAN Economic Community (AEC) in December 2016. Reyes (2008) indicated that using a second language medium (L2) instruction can have negative effects on science achievement.

To enhance pre-cadet's English skills, the pre-cadets have been set by positioning them into a bilingual classroom which has been established since 2012.

The problem confronting the school and teachers is how to strengthen the pre-cadets' scientific literacy during participate in the bilingual classroom. The school tried to solve this problem by introducing the FVR to the bilingual classrooms. Since in the last few decades, there are the evidences for FVR, showing that those who read more show superior literacy development. In addition, Krashen (2011) presented that the more comprehension checking teachers require, the less develop of literacy takes place, and also claimed that "hard work" and suffering are indications that literacy development is not taking place. Concerning studying Science, Mol & Bus (2011) proposed that the college and university students who read for pleasure may also be more successful academically. Moreover, USDOE (2012) presented that reading is a fundamental skill needed for success in areas such as Maths and Science. Furthermore, Bridges (2014) summarized that multiple studies have shown that avid readers demonstrate both superior literacy development and wide-ranging knowledge across subjects.

In order to maintain its declared objective of providing a high quality of education to military students, this study is one such way to find new ways to not only maintain a high level but to increase academic achievement in science literacy. The researcher focuses on whether or not FVR has any demonstrate benefit in terms of academic achievement in Science on the part of Thai high school third-year class pre-cadets.

## **Research objective**

The research objective is to find out if there are any differences in scientific literacy between the third-year class pre-cadets who engaged in free voluntary reading (FVR) and those who did not.

## **Research question**

Are there any differences in scientific achievement test scores between the third-year class pre-cadets who engaged in FVR and those who did not?

## Research hypothesis

Pre-cadets who engaged in FVR achieve a higher of scientific literacy as measured by the Science section of the adapted version of the international test known as the Programme for International Student Assessment (PISA).

## Definition of key terms

**free voluntary reading (FVR)** refers to reading any English materials in which students may choose to read anywhere and anytime.

**scientific literacy** refers to getting higher scores on the Science section of the PISA achievement test in the experimental group after the experiment.

**pre-cadets** refers to the third-year class pre-cadets (grade twelve), who are studying at AFAPS in the academic year 2015.

## Literature review on free voluntary reading (FVR)

There are a lot of types of reading that have been proofed for century. Free voluntary reading is the powerful instrument for developing literacy in various areas and subjects.

FVR is just as its name states; students are free to choose the materials they want to read and its voluntary reading; students can choose to - or not to - report in class on the reading which they have done. “Students are also free to - or not to - read at home. No requirements. No book reports. No journal entries. No chapter questions. No required home reading. It is a chance for students to kick back and read, no strings attached.” (Marson, 2005)

FVR means reading because you want to, putting down a book you don’t like and choosing another one instead, no book report, no questions at the end of the chapter, no looking up every vocabulary word. (Krashen, 2004a).

Krashen, a prominent figure in second language acquisition and reading for pleasure, coined the term “Free Voluntary Reading” or FVR in 1993. Krashen’s FVR theory challenged the traditional Skill-Building approach (phonics, grammar, vocabulary, and spelling). A key principle in

Krashen’s theory is the accessibility of understandable text in a low-anxiety situation.

FVR theory has been applied for use in schools recently as Sustained Silent Reading (SSR). Krashen (2011) provided guidelines for SSR as follows:

### 1.Information Resources

- 1) Provide access to books and other materials with great variety.
- 2) Put minimum censorship on materials.
- 3) It is legitimate to acquire comic books, magazines, easy books, hard books, and books written for language students of different levels.

## 2. Activities

- 1) The activities need to be distributed over short periods each day.
- 2) Provide less time to read than the students' ability to concentrate on reading.
- 3) Students need to have control over their book choices.
- 4) Students have freedom to stop reading.
- 5) Use supplementary activities, for example, read-aloud and book discussion when needed.
- 6) SSR is neither for beginners nor advanced readers.

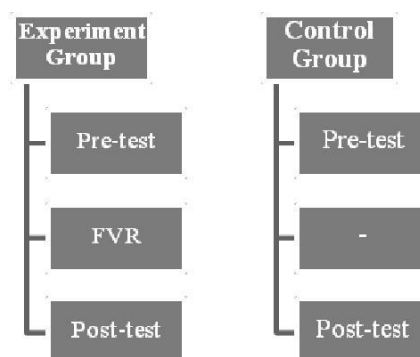
## 3. Accountability and Rewards

- 1) Use minimum accountability; do not require book reports and tests
- 2) Do not use rewards for reading but direct encouragement

There are related studies have shown that FVR can raise the science literacy. Krashen (2004b) noted that FVR is effective in increasing and improving scores on reading tests and other subject matter tests. In addition, Hand, Alvermann, Gee, Guzzetti, Norris, Philips, Prain, & Yore (2003) mentioned that without text and without reading, the social practices that make science possible could not be engaged.

## Research design

The research design used a pre-test and post-test which was the adapted version from the Science section of the international test known as the Programme for International Student Assessment (PISA). The achievement test was administrated to both groups once before and once after engaging in free voluntary reading (FVR) for over 6 weeks to find out students' scientific literacy. Then analyze pre-test and post-test.



**Figure 1:** Research design

## Research population

### Location

The study was carried out at the Forces Academies Preparatory School (AFAPS) which was located in Nakorn Nayok province, Thailand.

### Research population

The research population comprised of the third-year class pre-cadets 64 in total (grade twelve students), 32 pre-cadets in each class from two bilingual classes. One of the classes was assigned to be the experimental group and the other was the control group. They are all male about 17-19 years old. Table 1 presented the academic background of the students chosen from the 1st semester, 2015.

**Table 1:** Academic background of the students

Group	Test score's mean of 1 <sup>st</sup> semester (%)		
	Physics	Chemistry	English
Experimental group	74.53	82.53	83.74
Control group	75.94	82.32	83.18

### Research methodology

One group was used as the experimental group and the other as the control group. The pre-test was administered to both groups. The experimental group engaged in FVR while the control group did not. Both groups were taught the same topics by the same teachers. The post-test was administered to both groups after the experiment.

The experiment group was treated according to the following procedures:

- 1) Administer the pre-test.
- 2) Survey the reading interests by using questionnaire.
- 3) Prepare graded readers and tell them to choose their favorite ones.
- 4) Explain them about FVR rules which are:
  - 4.1) Don't read a book you don't like. Don't waste time with a book you don't love, there are others waiting for you.
  - 4.2) If you don't like a book, find another one. You can ask me or your friends for a recommendation.
  - 4.3) Read at a time suitable for you.
  - 4.4) It is all right to reread a book you love.

4.5) You can skim or skip parts if you get bored or stuck.

4.6) You are welcome to borrow books. Please don't forget to return them back and sometimes recommend a good one.

5) Encourage their reading by asking about the story.

### Research instrument

To study relationship between free voluntary reading and scientific literacy, the test was the Science section of the adapted version of the international test known as the Programme for International Student Assessment (PISA) from 2009 and 2015. The adapted version was used to measure scientific literacy of third-year class pre-cadets (grade twelve students). It was used as the pre-test and the post-test. The test consisted of forty questions (forty scores) which was selected by concerning on covering knowledge of the content of Science; physical systems, living systems, earth and space systems for 15-year-old students (grade nine students) as well as competencies and attitudes. Item response formats are simple multiple-choice, complex multiple-choice and constructed response. The test scores of pre-test and post-test of individuals were compared using t-test to see the level of scientific literacy at the end of the experiment.

The Program for International Student Assessment (PISA) is an international assessment that measures 15-year-old students' reading, mathematics, and science literacy every three years. First conducted in 2000, the major domain of study rotates between mathematics, science, and reading in each cycle. PISA also includes measures of general or cross-curricular competencies, such as collaborative problem solving. By designing, PISA emphasizes functional skills that students have acquired as they nearly finish the compulsory education. PISA is coordinated by the Organization for Economic Cooperation and Development (OECD). The latest assessment was in 2015.

OECD (2013) revealed the definition of scientific literacy for Programme for International Student Assessment (PISA) 2015 is the ability to engage with science-related issues, and with the ideas of science, as a reflective citizen.

**Table 2:** The major components of the PISA 2015 framework for scientific literacy Source: OECD, 2013

Competencies	Knowledge	Attitudes
<ul style="list-style-type: none"><li>• Explaining phenomena scientifically</li><li>• Evaluating and designing scientific enquiry</li><li>• Interpreting data and evidence scientifically</li></ul>	<ul style="list-style-type: none"><li>• Knowledge of the content of Science:<ul style="list-style-type: none"><li>→ Physical systems</li><li>→ Living systems</li><li>→ Earth and space systems</li></ul></li><li>• Procedural knowledge</li><li>• Epistemic knowledge</li></ul>	<ul style="list-style-type: none"><li>• Interest in science</li><li>• Valuing scientific approaches to enquiry</li><li>• Environmental awareness</li></ul>

## Result and data analysis

The data was electronically processed and analyzed by using the Statistical Package for the Social Sciences (SPSS) program. The result was only focused on scientific literacy from the test that was adapted from PISA. The mean and the standard deviation of pre-test and post-test data of both groups were computed. The means were compared within the groups and then between the groups by using paired samples t-test. The values of the 2-tailed significance (p-value) were compared to determine the significance of differences between the two means.

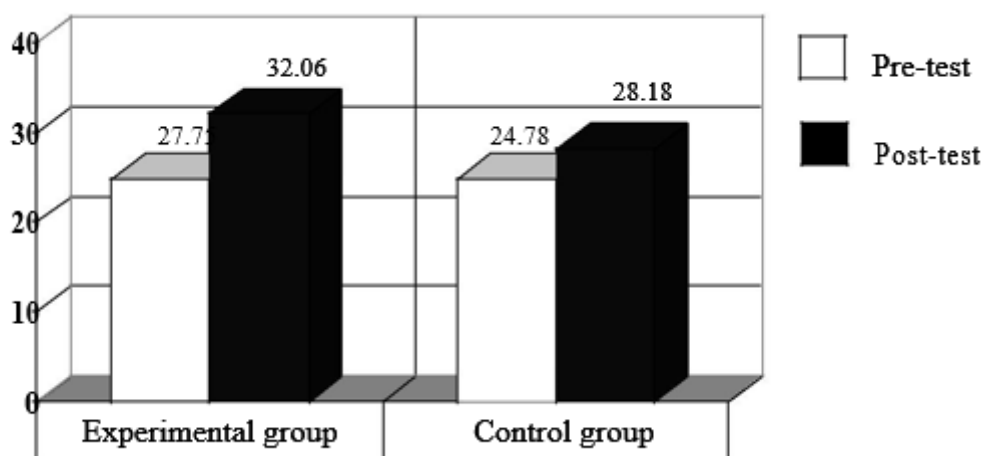
### Pre-test and post-test comparison of each of the two groups

The pre-test and post-test scores of each group were compared (out of 40 scores).

**Table 3:** Pre-test and post-test comparison of each of the two groups

Group	Experimental Group		Control Group	
	Pre-test	Post-test	Pre-test	Post-test
Mean (out of 40 scores)	24.75	32.06	24.78	28.18
Standard Deviation	6.8	4.69	6.65	5.47
Mean difference	7.31		3.4	

These data show that the mean difference in test score of the experimental group is more than double of the control group. The results are shown in a more graphic form in figure 2.



**Figure 2:** Pre-test and post-test comparison of each of the two groups (out of 40 scores)

### Pre-test and post-test comparison between the two groups

The data show that the pre-test mean of the experimental group was 24.75 and the mean of the control group was 24.78 (out of 40 scores). It was noted that they were almost equal and the 2-tailed test significance value was 0.96 which indicated that there was no significant difference between the pre-test mean in both groups. Thus, the data revealed that the two groups had equal levels of scientific literacy at the beginning of the experiment. See table 4.

**Table 4:** Pre-test comparison between the two groups

Test	Group	Mean (out of 40 scores)	SD	N	Mean difference	t-value	Df	p-value
Pre-test	Experimental	24.75	6.8	40	0.03	0.04	31	0.96
	Control	24.78	4.69	40				

\*Significance level: > 0.05- not significant, < 0.05-significant

The post-test mean of the experimental group was 32.06 and 28.18 for the control group (out of 40 scores). The 2-tailed test significance value was 0.00 which indicated that the learning achievement of the experimental group was significantly higher than that of the control group.

**Table 5:** Post-test comparison between the two groups

Test	Group	Mean (out of 40 scores)	SD	N	Mean difference	t-value	Df	p-value
Post-test	Experimental	32.06	6.65	40	3.88	8.06	31	0.00*
	Control	28.18	5.47	40				

\*Significance level: > 0.05- not significant, < 0.05-significant

## Discussion

The result of the study revealed that FVR increased the scientific literacy of the third-year class pre-cadets in a bilingual class at AFAPS. In this research, FVR was used as an instrument to enhance scientific literacy of the third-year class pre-cadets.

Krashen (2004b, 2011) claimed that FVR is effective in increasing and improving the reading tests and other subject matter tests, also pleasurable results in superior general knowledge, and literacy development in any levels; high school, college, and university students.

The findings of this study were that FVR increased significantly in the achievement test scores of the experimental group. This was an evidence from the result that showed the mean difference of 7.31 in the pre-test and post-test of the third-year class pre-cadets in the experimental group which is more than double of the control group.

## **Recommendations**

### **Recommendations for high schools**

According to the findings of this study, the following recommendations are proposed for the high schools as follows:

- 1) Head of schools are encouraged to ensure there is a wide variety reading materials at different level of difficulty available to students in school's libraries.
- 2) High school teachers everywhere are encouraged to introduce FVR to their students not just to students of Science.

### **Recommendations for further research**

Based on the findings from this study and also from the literature review, the researcher would like to recommend that further research could be pursued as follows:

- 1) Further research should be carried out to investigate the effectiveness of FVR for all subjects provided in ordinary schools, colleges, and universities in Thailand.
- 2) Because the amount of experimental time and the size of the research population for this study was relatively small, it is recommended that future studies should be carried out with larger populations and over larger period of time.

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# **The Relationship between Motivation and Passion for Learning with Self-Regulated Learning Strategies Among University Students**

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## **Abstract**

Learning motivation, passion for learning and self-regulated learning strategies help students in their learning activities. Motivation, passion for learning and self-regulated learning strategies are crucial in helping students be consistent in their learning activities. Therefore, the focus of this study was to determine the level of motivation, passion for learning and self-regulated learning strategies among university students as well as to identify the relationship between motivation and self-regulated learning strategies among university students. The study also identified the relationship between passion for learning and self-regulated learning strategies and thus determined the effect of motivation and passion for learning towards self-regulated learning strategies among university students. This study involved a survey of 155 undergraduate students from the physical science and social science background. The results showed that there was a high level of motivation and self-regulation strategies among students while the passion for learning was at a moderate level. The study also found that there is a simple relationship between motivation, passion for learning and self-regulated strategy. In addition, the results showed that motivation is more predictive for self-regulated learning strategies among students compared to passion for learning.

**Keywords:** Relationship, Motivation and Passion, Self-regulated learning

## **Introduction**

Learning and motivation are linked closely because learning itself is an active process that needs a sense of awareness. Throughout the learning process, students may face difficulties if little or zero concerns and efforts are given. Therefore, to assist the students in attaining maximum benefits from their education curricular, educators need to provide learning activities that will encourage the students to be actively involved in their learning (Stipek, 2002). Ishak (2004) stated that, in the work-life environment, motivation stimulates employee behaviour and channeling it correctly may benefit the organization as a whole. Similarly, in the context of education, motivation refers to the extent of a student is driven by its internal desire to achieve outstanding results in their studies.

In addition, Vallerand, Mageau, Elliot, Demers and Rousseau (2008) defines passion as a strong inclination towards a particular activity which they find important to the extent of willingness in investing their time and energy. Vallerand, Blanchard, Mageau, Koestner, Ratelle, Le'onard and Marsolais (2003) proposed two types of passion that shows the extent

of the internalization process in an individual identity. These two types are harmonious passion and obsessive passion. An individual with a harmonious passion has more freedom in getting involved in a particular activity and the pleasure attained does not involve internal or external pressure. Instead, individuals with obsessive passion tend to be controlled by external factors such as acceptance from his or her associates, teachers or internal aspect such as self-esteem and uncontrollable joy due to the pressure. These factors control their involvement in the activity. Such situation may discourage their passion for learning and engaging in the activity.

Self-regulated learning is one of the many interesting fields of Human Studies because it involves an understanding of how an individual discovers and take control of their physical, behavioural and psychological changes (Melissa Ng, 2010). Self-regulated learning is an independent learning where students take responsibilities and effectively organised their learning activities. Pintrich (2000) stated that self-regulated learning is a constructive process that students partake in setting goals and monitoring their studies, regulating and controlling their cognition, motivating and behaviours which are guided by their goals and the contextual features within the environment.

## **Motivation, Passion for Learning and Self-regulated learning strategies among university students in Malaysia**

The development of study in self-regulated learning in the current educational practice is essentially related to the differences in an individual or a student in dealing with learning difficulties. This is because some of the students show high enthusiasm and abilities in their studies, whereas some face difficulties in understanding, remembering and maintaining their interest (Azhar Ahmad, 2006). Since there is no interest and low motivation shown, the students will face difficulties in practicing self-regulated learning as well as managing their studies.

In addition, having little or no interest at all may cause a student to avoid getting engaged in self-regulated learning. Lack of passion may demotivate them in their studies causing low academic achievements in their respective field. Roussy, Vallerand and Bouffard (2012) stated that an individual with high level of passion will continuously give their effort and are willing to invest their time and energy because they enjoy the activity partake.

Therefore, the objectives of this study involving Third Year Undergraduate students from a faculty at a local university in Malaysia are:

1. To determine the level of motivation, passion for learning and self-regulated learning strategies.
2. To identify the relationship between motivation and self-regulated learning strategies among university students.
3. To identify the relationship between passion for learning and self-regulated learning strategies among university students.

## **Methodology**

Descriptive research method was used and the survey was conducted among Third Year Undergraduate students from a faculty at a local university in Malaysia The students

were selected by simple random sampling based on their maturity and experience of those who are considered more ‘senior’ compared to the First Year Undergraduate students who may still be adjusting to the university life environment. 155 students were selected in this study, which was based on Morgan & Krechie (1970) formula that requires at least 152 students for a population of 260.

A self-regulated learning strategies questionnaire was used in this study, which was adapted by Shamsilah Roslan (2001) based on the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich, Smith, Garcia and McKeachie (1991). Pintrich and colleagues invented a self-reporting instrument, with 81 items, based on the expectancy-value models of motivation (Pintrich, 2003; Wigfield and Eccles, 2000), with the objective of measuring the different components of motivation and learning strategies in a given course. One of the many advantages of this tool is the fact that it has been used and validated in multiple levels of education; in university or non-university.

The data collected were analysed in stages through quantitative methods that were derived from the questionnaire given to the respondents. SPSS Version 20 was used in the data analysis. Analysis of data was based on the research objectives.

**Table 1:** Objectives and statistical methods used

Objective		Statistical Method
i.	To determine the level of motivation, passion for learning and self-regulated learning strategies.	Descriptive
ii.	To identify the relationship between motivation and self-regulated learning strategies among university students.	Correlation
iii.	To identify the relationship between passion for learning and self-regulated learning strategies among university students.	Correlation
iv.	To determine the effect of motivation and passion for learning towards self-regulated learning strategies.	Regression

## Findings

Analysis results showed that the majority of the respondents’ motivation is at high level of 52.9%. 46.5% of respondents were at a moderate level while 0.6% respondents were at a low level. However, the overall mean obtained was 3.89. This value indicates that the motivation level is high.

**Table 2:** Level of Motivation

Level	Percentage (%)	Overall Mean
Low	0.6	
Moderate	46.5	3.89
High	52.9	

Analysis results showed that passion for learning among the majority of respondents were at a moderate level of 51.0%. Subsequently, a total of 48.4% respondents were at a high level while 0.6% of respondents were at a low level. However, the overall mean obtained was 3.61. This value indicates that the level of passion for learning among the students is at a moderate level.

**Table 3:** Level of Passion for Learning

Level	Percentage (%)	Overall Mean
Low	0.6	
Moderate	51.0	3.61
High	48.4	

Next, the findings of self-regulated learning strategies indicates that the majority of respondents were at a moderate level of 50.3%, followed by 49.1% in the high level, while only 0.6% were at low levels. The overall mean value of self-regulated learning strategies among the respondents are high.

**Table 4:** Level of self-regulated learning strategies

Level	Percentage (%)	Overall mean
Low	0.6	
Moderate	50.3	3.74
High	49.1	

The Pearson correlation test was used to identify the existence of a relationship between motivations and self-regulated learning strategies. The results showed that the alpha value is below 0.05. This value proves that there is a significantly positive and moderately strong relationship between motivation and self-regulated learning strategies. (.661,  $p < 0.01$ ).

**Table 5:** Relationship between motivation and self-regulated learning strategies

Variable	N	Correlation	Sig.	SPAK ( <i>r</i> )	Guildford's Rule of Thumb
Motivation	155	<i>Pearson</i>	.000	.661**	Moderate correlation

$P < 0.01^{**}$

$P < 0.05^{*}$

The Pearson correlation test was used to identify whether there is a relationship between passion for learning with self-regulated learning strategies. The results showed that the alpha value is below 0.05. The alpha value clearly indicates that there is a significantly

positive and moderately strong relationship between passion for learning and self-regulated learning strategies. (.565,  $p < 0.01$ ).

**Table 6:** The relationship between passion for learning and self-regulated learning strategies

Variable	N	Correlation	Sig. ( <i>p</i> )	SPAK ( <i>r</i> )	Guildford's Rule of Thumb
Passion for learning	155	<i>Pearson</i>	.000	.565**	Moderate correlation

$P < 0.01^{**}$

$P < 0.05^{*}$

Based on Table 6, analysis results showed that both of the variables, motivation and passion for learning, act as an indicator for self-regulated learning strategies among the students. However, motivational variable is more predictive in self-regulated learning strategies ( $r^2 = 0.488$ ,  $\beta = 0.501$ ,  $t = 7.062$ ,  $p < 0.01$ ). The passion for learning variable may also predict the self-regulated learning strategies among the students ( $r^2 = 0.488$ ,  $\beta = 0.277$ ,  $t = 3.895$ ,  $p < 0.01$ ). Therefore, it can be concluded that motivation is more predictive in self-regulated learning strategies compared to passion for learning among students.

**Table 7:** Motivation and Passion for Learning as a predictor in Self-regulated Learning strategies

Variable	$r^2$	$\beta$	<i>t</i>	Sig.
Motivation	0.488	0.501	7.062	0.000
Passion for Learning		0.277	3.895	0.000

$P < 0.01^{**}$

$P < 0.05^{*}$

## Discussion

The results of the study showed that the majority of the respondents agree that motivation plays a role in encouraging them to maintain their learning momentum. This motivation includes intrinsic and extrinsic, which drives them towards learning activities. Marius (2001) argues that students with intrinsic motivation do not require incentives or rewards compared to extrinsic motivation because the learning activities itself brings enough rewards and satisfactions. Similarly, with extrinsic motivation, students give their efforts to attain good grades and improving their cumulative grade point average (CGPA).

The level of passion for learning among university students is at a moderate level. The finding shows that the majority of the students did not give their fullest effort and commitment in their studies. In addition, it was found that most of the students have a high level of harmonious passion, while obsessive passion is at a moderate level. This shows that the students were not fully committed in their learning activities because they are worried that

it may affect other activities in their daily life. Through harmonious passion, efforts given to their learning activities can be maintained while keeping other activities at par.

Besides that, the usage of self-regulated learning strategies among the students seems to be at a high level. This indicates that the majority of students have been using the self-regulated learning strategies to maintain their focus, undivided attention, and achievements throughout the learning activities. Therefore, most of the students are more comfortable in using strategies such as the organise method that allows them to create or provide a set of guidelines and sketches based on their studies to assist them in organising their thinking patterns.

The findings also show that there is a positive and moderately strong relationship between motivations and Self-regulated learning strategies. This shows that the variables motivation and self-regulated learning strategies are interrelated. With a high motivation level, the efforts given to maintain the self-regulated learning strategies are high as well. Therefore, Wolters (2003) suggested that students with high motivational level will take steps to initiate, maintain or increase their willingness to work towards learning activities as well as maintaining their academic grades.

Similarly, there is a positive and moderately strong relationship between the two variables; Passion for Learning and Self-regulated learning strategies. This proves that passion for learning can increase the usage of self-regulated learning strategies among university students. Through passion for learning, the students are able to give their undivided attention and commitment towards the learning activities.

However, research has found that motivation is more predictive in self-regulated learning strategies compared to passion for learning among university students. It shows that the students are only driven to maintain their learning activities through Self-regulated learning strategies because of internal and external motivations. Through this motivation, the students are less worried and pressured compared to obsessive passion where it might affect them negatively such as feeling pressured. Being passionate is also necessary to maintain their commitment in studies. This situation has also been mentioned by Vallerand et. al (2003) where passion is a strong inclination towards an activity to the point that one willingly invest his or her time and energy and this shows that there is a strong relationship towards the activities favoured.

## **Conclusion**

Motivation and passion for learning plays an important role in a student's learning activity, especially in maintaining their morale and effort towards an outstanding achievement. Through motivation and passion for learning, it may also help the students to stay consistent in choosing and exercising the use of self-regulated learning strategies that may guide them in their learning activities. Moreover, passion for learning should be fostered among the students. Therefore, teachers and fellow educators especially, need to constantly instill positive values and words of encouragement to ensure that the students are able to go through a harmonious and effective learning process and thus increasing their academic achievements.

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# **Alternative Framework in Body Coordination Subtopic Science: Form Four Students in Interior of Malaysia**

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Malaysia

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## **Abstract**

Necessary for studies in the interior of Sabah Malaysia is to investigate the Alternative Framework (AF) with regards to science understudy learning in structure four subtopic science in Malaysia secondary school, Body Coordination (BC) topic. The timeframe investigation is 2014-2015. Along these periods, investigation AF among understudy on the BC subject help this study to dissect how understudies learn as opposed to discover what they realized. Mix method, longitudinal studies, observation, in depth interview and two tier questionnaire are methods used to administered this study. All 12 participants each 6 students in Ranau, Sabah Malaysia and 6 students in Beluran, Sabah Malaysia found that seventeen factors contribute to of AF are textbook, existing knowledge, environment, errors of fact, uncertainties, mentality, culture, disorder facts, self-mistake, blank 's slate, school, teachers, language jargon, a career member of the family, experience and scientific knowledge. This study suggest and promote the BC topic as new science content topic in science education studies.

**Keywords:** Alternative Framework, Body Coordination Subtopic, Two Tier Questionnaire

## **Introduction/Aim:**

In Malaysia Curriculum, Body Coordination Topic (BC) is part of the general science curriculum in upper secondary schools and it is taught to students in Form Four who are 16 years old. Based on Malaysia Curriculum Development Centre (CDC, 2005); Seligin, 2015) BC are taught under „Maintenance and Continuity of Life“ as seen in (Appendix 1).

## **Aim of Study**

To explore students understanding of BC.

## **Research Question**

What are the factors contribute to Alternative Framework in Body Coordination topic among the students.

## **Statement of Problem**

Students came to school with various interpretations which may directly or indirectly contribute to understanding of Body Coordination (BC) topic (Seligin et.al, 2015). And Taber (2014) asserted there are a great many studies into learners“ ideas in science topics, focusing on learners at different levels of the education system (Duit 2009; Taber 2009). These studies reveal that learners often present ideas relating to science topics which are at odds with the target knowledge set out in the curriculum. These ideas have been described using a wide range of terms, including misconceptions, preconceptions, alternative conceptions, alternative

frameworks, alternative conceptual frameworks, intuitive theories, and mini-theories. Sometimes particular authors distinguish between meanings for some of these terms, but usage varies across the literature so often the different labels are, in effect, broad synonyms (Taber 2014) but in this report, we insisted use the term Alternative Framework (AF) regarded to what the framework that constructed from students alternative view. So, in this report we attempts to listdown what is the factors contribute to Alternative Framework in Body Coordination topic among the students. We followed the Information Processing Theory (Gagne, 1965; 1968) as Theoretical framework is this study.

## **Methodology**

We administered the Body Coordination Two Tier Concept Test (BCTTCT) to examine and detect the participant understanding include the BC science concept. Driver and Easley(1978) report that an AF tools that appropriate to describe the framework of students opinion to interpret natural fenomenan (Seligin, 2015). BCTTCT consist of 20 question with 2 level. For Level 1, participant will answer the question, and for level 2, the same participant will be interviewed about their opinion based on answered given. Difficulty level of this question are 0.55 are moderate for students and suitable to generate in real field. Purposive sampling were used in our research.

Validation the BCTTCT, we administered of pilot study in others school in Malaysia. This is qualitative research and employed fenomenological study.

12 participant only in two schools in interior of Sabah Malaysia. The participants, All 12 participants each 6 students in two different school in interior of Sabah Malaysia. We marked the students in Ranau with R1 and in Beluran is R1.

Location of study in Malaysia Sabah can be traced via Maps Google Earth (Appendix 2).

## **Results**

In this report, the finding shows that seventeen factors contributed to AF among those participant are textbook, existing knowledge, environment, errors of fact, uncertainties, mentality, culture, disorder facts, self-mistake, blank 's slate, school, teachers, language jargon, a career member of the family, experience and scientific knowledge.

### **Mentality**

### **Experience**

#### **Text book**

The textbook is a resource that is important in interior R1 and B1 Sabah. This can be evidenced through interviews in Table 1 . Participant 1 proved the role of textbooks as a means to gain knowledge is still relevant in the context of the students in the interior of Sabah.

**Table 1:** Text book

Number	Data	Subtema	AF Factors
Participant 1 Phase I 2014	page. 1, line 35 “Hmm ... textbooks indeed talked about the coordination of the nervous and chemical coordination”	Coordination Between the Nervous System and the Endocrine System	Text book

**Prerequisite of Knowledge**

Factors such as existing knowledge of students who establish themselves capable of causing scientific knowledge of the participants did not develop. In Table 2, Participant 1 2014 session, used their own knowledge or experience to answer the questions given by researchers.

**Table 2:** Prerequisite of Knowledge

Number	Data	Subtema	AF Factors
Participant 1 Phase I 2014	page. 1, line 43 “ Hmmm ... Coordination causes voluntary action and involuntary ”	Nervous Coordination	Prerequisite of Knowledge

**Environment**

Previous studies showed that environmental factors can give a deep impression on the participants, moreover not to mention the answers given by the participants. In Table 3, under the action of controlled for example yawning as the effect and influence of the environment were observed.

**Table 3:** Environment

Number	Data	Subtema	AF Factors
Participant 1 Phase I 2014	ms. 1, baris 44 “ Examples of voluntary actions aarr writing and involuntary action is yawning ”	Nervous Coordination	Environment

**Errors of fact**

Science subjects in the PMR and SPM is a real scientific fact which was confirmed by the Curriculum Development Centre (CDC) Malaysia and applied to be taught in schools. Therefore, when Participant One responses, she answered were categorized as having an error of fact as in Table 4.

**Table 4:** Errors of fact

Number	Data	Subtema	AF Factors
Participant 1 Phase II	page 2, line 53-56 “ Hmmm ... hmmm reason	Nerves Coordination	Errors of fact

2015	(silent in 10 seconds ) nervous system actual nerve center spinal receive , then he submit to the organ . To create voluntary actions to protect ar ... "		
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### Errorneus of Concept

In this study, the concepts and facts is a different entity. According to Thijs & Van den Berg (1995) concept of a scientific idea underlying a class of things or events as suggested by the community of scientists and documented in textbooks. The underlying concept is the idea of something, the general meaning; concept (Hornby, 2000). The concept requires a wide range of meanings associated with other concepts. Magenta (2008) stressed the concept can only be observed or measured through constructs or better known by the name of the variable. So variable is a symbol or emblem that shows the value or number of concepts. The concept is an abstract term effects of the application of theory. In other words the concept of defining the term, while theory would explain the term (Asmawi Noor Saarani, 2013), while for example the fact the scientific facts are facts. Table 5 shows misconceptions answers given by participants 1 when interviewed.

**Table 5:** Errorneus of Concept

Number	Data	Subtema	AF Factors
P1BI	ms. 2, baris 70-73 P1 : " Because ... ar ... aaaa cranial nerves ... he is ... he covers the spinal cord spinal cord too (while laughing sheepishly )." R: " So ... where is it?" P1 : " In ... in the head . "	Nerves Coordination	Errorneus of Concept

### Uncertainties

Many students found the answer in the form of uncertainty that participants honestly answer the participants' answers cannot be obtained due to the lack of facts or information that has been lost during the learning process throughout the two years of preparation and in the upper secondary school. Table 5:26 and 5:27 Table 3. Participant 1 and Participant answer is not sure of the answer. These shows the participants did not master the facts related to this question.

**Table 6:** Uncertainties

Number	Data	Subtema	AF Factors
P3B1 Phase II	page 3, line 155 P4 : Hmm ... ( while stationary ) . I do not know the this	Human Brain	self

2015	answers. I'm not sure".		
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### Culture

Culture is powerful tools according to observations in this study. investigators , both locations surveyed have a somewhat different culture . Among the terms of the dialect , the level of which was given to answer questions or in terms of nutrition and beverages . In Table 1 5:28 participants easily answered question 17 because yeast is a food supplement because the 1 already know the function of yeast that is added as a catalyst through small scale industrial manufacturing industries , namely fermented . Furthermore fermented beverage that must be added to the yeasts have become synonymous with the culture of flesh and blood people around SMK Kemburongoh who like to drink „tapai“ or „tumpung“, sabahan traditional of drink.

**Table 7:** Culture

Number	Data	Subtema	AF Factors
P5R1 Phase 1 2014	page 5, line 229 : "Because the yeast used to make fermented ... (laughs)	Effect of excessive alcohol usage	Culture

### Chaos of facts

According to the researchers, delirium or chaos fact actually caused by information scientific fact that too load should be memorized by the participants . But if such information cannot be basis to better, perfect and in order then this condition is the participants had chaos of fact.

**Table 8:** Chaos of facts

Number	Data	Subtheme	AF Factors
Participant 2 B1 Phase 2 2015	page 1, line 54 “Because the action is moving In the same time and place in an appropriate rate to determine the response of the body”	Endoktrine system	Chaos of facts (Correct answer but wrong explanation)

### Self-Mistake

Sometimes the barrier of self is the other most dangerous weapon to overcome. Thus through training, commitment and continuous effort then high performance can be achieved. Obstruction of oneself can be seen in Table 3 5:30 when participants expressed uncertainty through the answers given.

**Table 9:** Self

Number	Data	Subtheme	AF Factors
P3B1 Phase 2 2015	ms. 3, baris 155 P3 : " Hmm ... ( groaning). I do not know the answers for this . I'm not sure.."	Human brain	self

### Blank's Slate

A lot of of graduate studies prove that participants do not have the knowledge or information relating to scientific questions queried called ' empty plate ' or ' 's blank slate ' . In Table 5.31 and Table 5:32 the same situation identified through individual interviews with participants 4 sessions 2014 in which participants answered with paragraph 4 ' ,.....no know is..."

**Table 10:** Blank's Slate

Number	Data	Subtema	AF Factors
P5 Fasa I 2014	Page 5, line 238  P : " Ok..what is the gastric juice ? "  P5 : " Hmm ... I do not know sir . The first time to hear ...it "	Human Nerves System	Blank slates

### School

School is a formal learning activity center participants during the 11 years of their studies in primary and secondary schools . Thus the role of schools as centers of knowledge is not conclusive function and its role in the world. Information correct answer due to the activities planned by the school management has helped answer the participants answer this question in Table 5.33. Participants 5 can answer this question better when remember it for being involved with the anti-drug campaign that followed in his school.

**Table 11:** School

Number	Data	Subtema	AF Factors
P5 Phase II 2015	page. 2, line 69  R : " Ok ... Question fifteen how about this ? "  P5 : " Hmm ... I don't know teacher, but arr.. eg nicotine is an example of the type of drugs ... "  R: "Ok. How do you know instance nicotine ? "  P5 : " Because recently there was a poster of drugs in schools . So I remember this example ... "	Proprioceptors	School

### Teachers

This study found that teachers are among the most trusted source in rural areas. Available through teacher observation is the subject of a reference in the rural hinterland of R1 and B1 , teachers are still respected and serve as a referral center in case of any problems encountered. The Senior Assistant 1 in B1, Mr Mazlan Yunok, and at the same time a school warden on duty there since 2001 again . He seems to have charisma and a friendly approach to

win the hearts of the students in SMKTS . He also looks so respected among the locals there. Surely he was one of the few teachers who are committed to implement basic education in rural and remote areas of Sabah.

### Jargon Language

Science is among the subjects that have many terms that need to be mastered as inventory and supplies to exams such as PMR and SPM or STPM . As subjects full term or scientific language (jargon) are often also contribute to AF among students . When students do not know the meaning of terms that appear in question, to some extent affected the participants' understanding of such questions as the conversation in the Table 5.63 below.

**Table 12:** Jargon Language

Number	Data	Subtheme	AF Factors
P5 Phase I 2014	page 5, line 214  R : "Oh ok . What is posture ?"  P5 : " Inda ' ( do not ) know (chuckle)"	Human Brain	Jargon language

### Career of the family member

Family seeks impact in shaping the world of student life . Sometimes the success , failure or reverse the advance of a participant or student performance is based on the role played by their family institution . However, in the example of Table 5:37 career roles of family members , brother of four who works in the military led to the use of drugs often used by a handful of soldiers while on duty .

**Table 13:** Career of family member

Nombor	Data	Subtheme	AF Factors
B1 P4 Phase I 2014	page. 2, line 114  P4 : " Because it is used in the field of hard work like an army . " R: " Ok ... Why for example soldier ? " P4 : " Ooo ... my brother served in the army so there are friends who are depressed sometimes take drugs ... "	Importance of good mind	Career of family member

### Experience

Every day is a day-to- day experience of participants that add more knowledge to knowledge in their minds . This situation indirectly cause such experiences affect how contestants answer questions put by researchers . For example in the Table below 5:38 to 6 participants experience allows dogs chased the answer is to get carried away as a result of actual experience suffered by the participants.

**Table 14:** Experience

Number	Data	Subthema	AF
P6	page. 2, line 79 P : " An example of an emergency ? " P6 : " Chased dog "	Coordination Between the Nervous System and the Endocrine System	Experience

### Scientific Knowledge

Science is among the subjects that are full of words . Various scenarios of learning in the classroom that can be proved that any student can attempt to master the fine header learning of science is learned properly or there are also students who need reading repeated and continuing to dominate the headlines that have been learned or have students that keep forgetting the fact that they have learned that day. But essentially they have to learn facts by both the scientific facts based on scientific knowledge.

**Table 15:** Scientific Knowledge

Number	Data	Subtheme	AF Factors
R1 P2 Phase II      2015	page. 2, line 45 P2: " Just look at the bones in the s kull bone . Cranial bones are located in the head just that. Cranial nerves located here (as he showed the back of the neck) to the same spinal cord	Human Nerve System	Scientific knowledge

### Ambiguity

The statement below shows the science subject is an abstract, vague and ambiguity to Participant 5.

### Discussion

Finding shows all participant from different level in class contribute to AF. This study shown that wherever the students come froms, they still have the factors who contibute the AF. The study support the theory used in this research.

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# **A Study of the Effect of Project-Based Learning on Undergraduate English Majors' Learning Achievement in Teaching English Literature Course**

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## **Abstract**

Traditionally, instruction and learning activities in the Method of Teaching Literature courses are conducted via lectures, reading-writing logs, and classroom discussion. This classroom action research experimented with the use of an alternative teaching method by implementing Project-based learning in the "English Literature for Classroom Teaching (CEN 4103)" course at the Faculty of Education, Ramkhamhaeng University, Thailand, in order to see what kind of effect this type of teaching method has on the students' learning achievement. Subjects of the study were students enrolled in the second semester of 2015. They were put into groups of 5-6 with a total of 10 groups. Each group was assigned a different literature, suggested study topics for each project, and a project schedule. The class met once a week for a 110 minute-session for 14 consecutive weeks. The sessions were used for group collaboration and clarification of the tasks. Upon completion of the project, each group was expected to come up with a complete teaching plan, comprising an analysis of the literature components such as theme, plot, characters, settings, and the like, including search for social, economic and political background of the story, preparation of pre-, during-, and post-reading activities, instructional media, and assessment. At the end of the course, an exhibition was held to showcase each group's end products. An evaluation of the subjects' learning was done using rubric-type instruments, together with an open-ended questionnaire to gauge their opinions toward project-based learning. Findings of the study showed that the students' achievement met the set criteria of 75 percent. Despite having to work harder than usual, the students expressed their satisfaction with this method of learning in terms of having more opportunities for collaboration with peers, expressing creativity, and practicing social and leadership skills.

**Keywords:** Teaching, English Literature, Project-Based Learning

## **Introduction**

Literature enhances so many dimensions of one's life. Educators realize the potential of literature, so they use it as a vehicle to achieve many educational goals. (Roe and Ross, 2006) Apart from being a source of pleasure for the readers, literature helps expand the students' horizon of life and the world through vicarious experiences. So, in a way, literature is in itself a multicultural lesson for our students who are growing up in an increasingly multicultural society. From reading through literature, students have seen examples of good language use which they can model after and how authors use words and make words speak for them while creating numerous types of feeling, emotions, and inspiration in the readers' minds. Literature can also develop the readers' thinking skills when they try to follow the thoughts and behaviors of the characters in a novel (Hollander, 2012). These are the skills that children can draw upon for use later in their life. Literature can also help children with their problem as in bibliotherapy in which particular type of literature is used to develop

empathic understandings of others and at the same time promote interpersonal skills and emotional maturity to cope with life's problems. (Lucas and Soares, 2013). With all these benefits, literature is included in the curriculum and integrated in the language arts and English subjects at all levels of grade schools. English teachers are, therefore, need to be trained to be able to organize literature lessons effectively.

The teacher training curriculum for English major at the Faculty of Education at Ramkhamhaeng University has provided a literature base for its students by including both the literature content courses and a teaching methodology course. The Teaching Methodology course (CEN 4103) covers such topics as Roles of literature in language teaching, Literature and learners, Approaches, methods and strategies in teaching literature, Instructional media, and Assessment of learning. At the end of the course, the students are expected to prepare teaching plans for literature lessons based on a chosen literature. In so doing, students need to 1) do a research on the chosen literature; 2) read the literature thoroughly; 3) identify the elements of the chosen literature (such as theme, plot, characters, and etc.) that can be used as starting points to organize pre-, during-, and post-reading activities; 4) identify the instructional media needed; and 5) identify the assessment strategies. The course has been conducted via traditional methods and strategies like lectures, assignments on reading and writing log, keeping journals, and some class discussion. There is nothing wrong with these teaching strategies and the students mastered the course contents as required. However, with these kinds of activities, students tend to be passive learners since most of the work involve individualistic responsibility of each student. In terms of course contents, this method of teaching can accomplish the goal of having the students understand the why and how of teaching literature, which is only one domain of learning - cognitive.

Project-based learning or PBL has been present in the educational circle for quite some years, but most of them involve work in the field of science, applied science, and art, so much so that it is stereo-typed as the method for the scientists or the artists. Looking through literature concerning teaching methods, the researcher finds that teachers of English can move away from the traditional, textbook-and-test based instruction and employ PBL (Fragoulis, 2009). With PBL, students will get a chance to have learning experiences that go deeper than surface-level understanding, have more engagement with peers, have more voice in their own education, and see the connection between the classroom learning and the world beyond. (Boss, 2014) The researcher, then, decided to try a class action research on PBL.

The primary aim of this study is to apply the project-based learning to the Teaching Literature Course to see if the method can make the students achieve the course goals at or above 75 percent. The secondary aim is to provide the students with actual experiences of learning through projects so that they will know how to use this method comfortably when they themselves become teachers in the grade schools. If proved working, the method will be expanded to cover other teacher training courses.

## **Methodology**

### **Sample and Instrumentation**

The method of teaching literature class for 5-year English majors at the Faculty of Education, Ramkhamhaeng University, Thailand is CEN 4103 (English Literature for Classroom Teaching) which is scheduled in the second semester for fourth-year students.

Subjects of this study were 55 students enrolled in this course in 2015. Students were randomly grouped into 5-6 students each, for a total of 10 groups.

The instruments of the study consisted of: 1) a course book, 2) a designated literature for each group, 3) a timeline specifying the project titles, Driving Questions (DQs) and the allotted time for the end products of the projects, 4) two scoring rubrics together with their descriptors, one for mini-projects and another for the oral presentation, and 5) an open-ended questionnaire.

The content of the teaching literature course was broken up into eight mini-projects, inclusive of the exhibition at the end of the course. The titles of the mini-projects included Analysis of literary elements, Background information, Pre-reading activities, During-reading activities, Post-reading activities, Instructional media, Lesson plan, and Exhibition. At the end of the course, through the mini-projects they had completed, the students would learn the methodology and strategies in teaching literature, how to prepare lesson plans, instructional media, and assessment of student learning. The course book was used as the basic starting source for project information.

Literature used in this study came from the Literature Name List which the researcher has kept over the years. When the course ended each semester, the students were asked to contribute a name or two of literature they found interesting and the list grew. After the review of the Name List, students agreed on 10 titles and the title was assigned to each group on a lottery basis. The 10 titles included in this study are: *The Indian in the Cupboard*, *The Mouse and the Motorcycle*, *Number the Stars*, *Sandstorm*, *The Cricket in Times Square*, *The Best Christmas Pageant Ever*, *Bunnicula*, *Bridge to Terabithia*, *Because of Winn-Dixie*, and *The War with Grandpa*.

### **Procedures**

Each group of students was provided with a course book, the designated literature, and a timeline for the projects. They were given a free-hand in planning and managing their projects. They met both in and out-of-class as needed, but they were required to attend the class once a week for 110-minute session as scheduled by the University. The class time was used mainly for group collaboration and sometime the teacher held a mini-lecture to clarify points which most groups misunderstood. Also, during the class time the teacher got to see how far each group had gone with his/her plan, and, particularly, to evaluate their group skills.

The group started each of its project by considering the Driving Question(s) of that particular project, studied the course book, did more search on that particular topic from other sources, studied its own literature, and tried to come up with the answer to the DQ in the form of an end product within the allotted time frame. An example of DQ for the first project was "What does it take to be a good story?" or the DQ for the third project was "What kind of activities draw students' attention to the story?". The groups were given two weeks to finish one mini-project, except the one on lesson planning which took only one week. At the end of the course, the groups show-cased their last mini-project by organizing an exhibition and gave an oral presentation on their literature.

Assessment of students' learning were done authentically during group work and on the end products. The researcher collected the data using an analytic scoring rubric to evaluate the following aspects of the project work: Group skills, Relevance and organization of the project content and inquiry skills, Creativity, and Time management. In Group skills,

the following traits were considered: sharing of ideas, acceptance of different viewpoints, respect, conflict resolution, group discussion and individual contribution to the finished end product. For Relevancy and organization of the project content and inquiry skills, the outcome of which showed how much the students mastered the course content, the researcher looked at the accuracy of the content and how the product directly answered the DQ, the variety of researched sources, documentation of the sources, and a rationally/theoretically organization of the content. For Creativity, the descriptors focus on innovation, different perspectives and attractive way of presenting the end product. For Time management, students were evaluated for planning, time on task during class hours, flexibility, and punctuality. Another rubric was used for oral presentation at the exhibition. It evaluated both nonverbal skills (eye contact, body language, and poise) and verbal skills (clear voice, correct pronunciation, and enthusiasm). Also at the closing of the course, students were given an open-ended questionnaire which asked them to reflect on their experiences in project-based learning.

Analysis of the data was done by putting scores from each mini-project and the oral presentation together and calculated for percentage of achievement. Opinions from the questionnaires were grouped and discussed.

## Results and Discussion

The aim of this study was to see how project-based learning could help achieve the learning goals of the teaching literature course. It was hypothesized that at the end of this class action experiment, the achievement of the undergraduate English majors would meet the 75 percent criterion. The results as shown in Table 1 supported the hypothesis.

**Table 1:** Groups' Achievement Scores on Individual Projects

Group #	Project # (scores in percentage)								mean
	1	2	3	4	5	6	7	8	
1	73.33	73.33	75.00	76.67	83.33	81.67	81.67	81.67	78.33
2	71.66	73.33	73.33	75.00	78.33	80.00	78.33	83.33	76.66
3	75.00	75.00	78.33	80.00	80.00	81.67	81.67	83.33	79.37
4	71.66	73.33	75.00	75.00	78.33	81.67	81.67	81.67	77.29
5	66.67	71.66	71.66	75.00	78.33	81.67	78.33	81.67	75.62
6	71.66	71.66	73.33	75.00	75.00	81.67	78.33	81.67	76.04
7	68.33	71.66	75.00	75.00	78.33	78.33	81.67	83.33	76.45
8	66.67	73.33	73.33	78.33	78.33	81.67	81.67	81.67	76.87
9	71.66	71.66	73.33	78.33	81.67	81.67	83.33	83.33	78.12
10	71.66	75.00	75.00	78.33	81.67	81.67	83.33	83.33	78.74

From Table 1, each group started out at the score of 75 percent or lower. As they worked on their projects, the scores improved. The overall scores of all groups exceeded the set criterion. The improvement ranged from the lowest of 4.37 percent to the highest of 10.20 percent.

The students' reflections on their experiences in project-based learning were analyzed and grouped as shown in Table 2.

**Table 2:** A Summary of Students' Reflection of PBL

Reflections	Frequency	Reflections	Frequency
Team working		Self development	
Unity	14	Pride	9
Collaboration	24	Leadership	2
Planning	13	Perseverance	15
		Self-discipline	4
		Responsibility	8
		Confidence	3
Conflict resolution		Human skills	
Tolerance	17	Interaction	4
Diversifying viewpoints	18	Friendship	11
		Forgiveness and compassion	4
		Sacrifice and spirit	14
Enjoyment	19	Creativity, problem-solving and flexibility	11

From Table 2, almost half of the cohort (24 persons) expressed favorable attitudes toward team collaboration. Of note were other opinions indicating that project-based learning gave them the chance to have tolerance for difference in opinions and a chance to diversify one's viewpoint, to practice perseverance (from 14 consecutive weeks of hard work), to make certain sacrifice and show spirit, to have unity so that they could reach the group's goal, to realize the importance of good planning, and to build friendship. One student made an interesting comment about conflicting points of view when working in group and she summed it up this way, "It is natural for human to view things differently, but if ones have a common goal in mind, that difference or even conflicting views could lead to a creative end." Another comment had to do with anger. The student said, "When everyone wants to have her own way and everyone is getting angry, I must control my own anger and at the same time tolerate my friends' anger."

Most surprisingly, despite all the grumbles about having to work hard all semester without a break, and the situation got quite worrying during the first two weeks of the experiment because there were a few dropouts due to hard work, one-third of the cohort actually enjoyed learning through projects and they recommended using this method again in the next course. Without being told the benefits or project-based learning, through their own authentic experiences, the subjects of the study had completely spelled them out themselves.

## Conclusions

The goal of this study was started out as looking at PBL and how it could increase students' achievement in terms of their knowledge about how to organize literature lessons, and the scores in Table 1 confirmed a good result. However, that being said, it is worth noting that the findings indicate more aspects of learning other than the expected cognitive achievement of the students. They draw our attention to the benefits of group process as a tool to increase achievement along with such important skills in life as problem-solving, creativity, critical thinking, and interpersonal, which a number of our students are lacking.

The implication from the result of this research for instruction at the higher education institution is that project-based learning is not limited to the learning in the branch of

science. It has proved effective with a subject on teacher training. However, some words of caution here, in applying this method, instructors must shift their teaching paradigm from the lecture-based one to that centering on the learners. The following four dimensions of teaching and learning must be considered to accommodate the new teaching paradigm, namely, how we set learning goals, student engagement, class structure and management, and concept of assessment.

In setting the learning goals, instructors ought to include not only the academic outcomes of course content but must include also such 21<sup>st</sup> century skills as collaboration, critical thinking, and creativity. Student engagement in PBL means teacher interacts with students differently by giving students more autonomy to learn by themselves and making some mistakes along the route, and not expecting students to work on the same thing at the same time. Classroom structure needs to be reconfigured to facilitate team working and collaboration, and students should be left to manage their own planning of the class time.

Most importantly is the concept of assessment that needs to be altered to fit the philosophy of PBL. One test at the end of the course will never reflect what students learn through projects. An emphasis must be given to the learning process in which students develop several skills simultaneously. In this study, the researcher uses scoring rubrics which look at many aspects of the students' works and their skills. Thus, the students' achievement talked about in this context does not mean only the academic achievement or how much they learn how to teach literature but it also means how much content they have learned plus how much they learn how to cope when problems arise and how to work with others to achieve the common goal. In short, it is not only the cognitive but also the metacognitive skills that they have gained.

## **Recommendations for Practice**

The author offers the following recommendations:

Guiding students through project works for a whole semester is a hard work that needs good preparation in advance and close attentions while students are doing projects, but the result is well worth the efforts. However, if teachers feel that the whole semester (14-16 weeks) of project work is too long, they can use project-based learning as part of a regular course. As suggested by one of the group which the researcher also agrees, if instructors are not familiar with PBL, they could start small by mixing mini-project into a lecture-based course until they feel more confident.

Some students may not be familiar with or feel uncomfortable with group work and delegation of responsibilities. At the outset of the project work, teachers should pay close attention to how individual students adjust themselves to the group work and advise them accordingly.

PBL in language course is possible and yield good result but in using it as an instructional tool, instructors need to consider their course analytically in order to turn the course content into a project or a series of projects. It needs good planning on the part of the instructors. It is in no way as simple as telling the students on their first day to just "do a project on this literature."

It is interesting to study the relationships between PBL and its role as a means to develop students' metacognitive skills.

Once the project work gets going, it requires a high level of initiations on the part of the students since they are given only the DQs and a broad outline of the expected outcomes. As a group, students must find their own paths to reach their goals. Teacher supports are still necessary, but to a degree. Student initiations are very important. They are not synonymous with creativity, though sometimes they include creativity. Student initiations mean the students know what the first step they should take are, and are not afraid to follow that particular route. Teachers must take an understanding view of these student initiations and do not label them as failures when they do not work out as planned.

It is also recommended that a study to compare the effectiveness of the PBL and the traditional method be conducted to find out whether the claim that PBL is more effective in a teaching methodology course could be substantiated.

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# A Training Design for College English Teachers

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## Abstract

This study generated a training design for college teachers on communicative teaching. Through needs assessment, the English teachers were reoriented and equipped with the rationale, strategies and assessment techniques of communicative language teaching through the six learning segments which were revised and finalized after a three-day try out. Five stages in the modified Needs Analysis Plan Try out Create Assess (NAPTCA) model was utilized to undertake the study. Specifically, the study determined: (1) the stages in the development of the training design and (2) the contents of the learning segments as a research output. Furthermore, the needs analysis results showed that teachers needed to develop competencies in communicative teaching. Hence, the produced training design included areas for various opportunities of student-talk to be provided among English classes thus calling for teachers' creativity in designing meaningful and communicative tasks. Other topics were inclusive of teachers' exposure to communicative teaching.

**Keywords:** Training, Design, Communicative Language Teaching

## Introduction

Song Seng (1997) states that teacher competence is an essential factor for achieving educational excellence. To ensure that teachers are accountable and knowledgeable about the subject they teach, emphasis has been placed on professional training of new educational systems' designs. Teachers, as the key component of an educational system, need professional training to assure efficiency of students' learning. Thus, educational systems should be driven by the need to achieve efficiency, effectiveness and equity. This highlights the importance of training on-the-job teachers.

For a teacher to develop his competence, the primacy of the classroom is indeed high. It is in that learning environment where she/he becomes the principal agent of change. It is where her/his experience is based and where growth will take effect (Wajnryb, 1992). Considering the importance of the classroom in a teaching-learning process, this research focused on looking at students in their English classes to see how their teachers develop their communicative competence. Developing students' communication skills is vital for them to become professionals, Danao (2002) says. She explains in her book, *Confluence: Journeys* that students need to learn the body of material for the profession they are preparing for. This body of material in the different disciplines is in English. Most importantly, students need to know how to communicate in English since it is an international language, and one of the official languages of the Philippines and of Philippine education. Thus, the English subjects in college must equip students to become the professionals they want to be.

English teachers then must try to hold on against the rapid wearing down of the position of English in the Philippines. Eugenio (1999) suggests that the line can best be

defended at the level of the teaching of English in college. Many strategies come and go but these are not appreciated because teachers have not redirected their traditional teaching style. For this reason, the researchers developed the training design.

This is composed of segments that are designed for English teachers to maximize learners' communicative potentials. Bartlett (1990) supports this idea for he believes that the process of learning is active, not a passive one. Active learning, one that involve students in classroom communicative tasks, allows learning to be both more personal and more memorable and for these reasons, is more effective. Learners who are engaged by the lesson – by the teacher, the materials, the tasks, and the activities – are more likely to have that learning make an impact on them.

Generally, this research aimed to reorient teachers' perspectives in teaching English in which a training design for College English teachers was designed so that in their English classes, they will develop students' communication skills. This is supported by Krum (1993) as he strongly points out that 'If the teaching goal of modern language teaching is the students' ability to communicate, then it holds especially true that the teacher should hold himself back in favor of the student. Hence, this study determined: (1.) What stages compose the development of the training design for college communicative teaching and (2.) What the contents of the learning segments for communicative teaching are.

## **Theoretical Framework**

Recent data confirm the significant role of teacher training providing differentiated instruction for various types of learners (Hansen, 1994). Students have varied competencies so the teaching strategies that will be used in class must match their potentials. Thus there is every reason to place students with teachers who have received training. The benefits that learners get from these trained teachers become greater.

Pica and Long (1996) revealed in a classroom observation research that teachers tend to do most of the talking. They also found that teachers tend to talk for about two-thirds of the available class time, leaving just a third for learners. Also, in some language classrooms, it has been shown that teachers talk for up to eighty nine percent of the available time. These cases leave very little room for students to communicate which defeats the purpose of language teaching. Hence, a training scheme to reorient English teachers' perspectives towards communicative teaching was designed.

Various theories and concepts aided the researchers in the production of the training design. The said training situated a scheme composed of learning segments so planned as to result in communicative teaching. Moreover, the paper utilized concepts from the theory of Johns (1997), which is the Eight Steps to Planning an Effective Training Event. The first step in Johns' model is the design of a training which defines the purpose of the training and target audience. This is followed by determining participants' needs intended to create a meaningful training event for the participants, as the second step. After assessing the needs and expectations of the participants, John goes on to say that defining training goals and objectives will help clarify expected outcomes. This is the third step. With the goals and objectives set, training content can be outlined. This serves as the fourth step in the model which the researchers divided into three key segments: an introduction, a learning component and a wrap up and evaluation component. The introduction serves to reduce anxiety of participants while the learning component as body of the program serves to

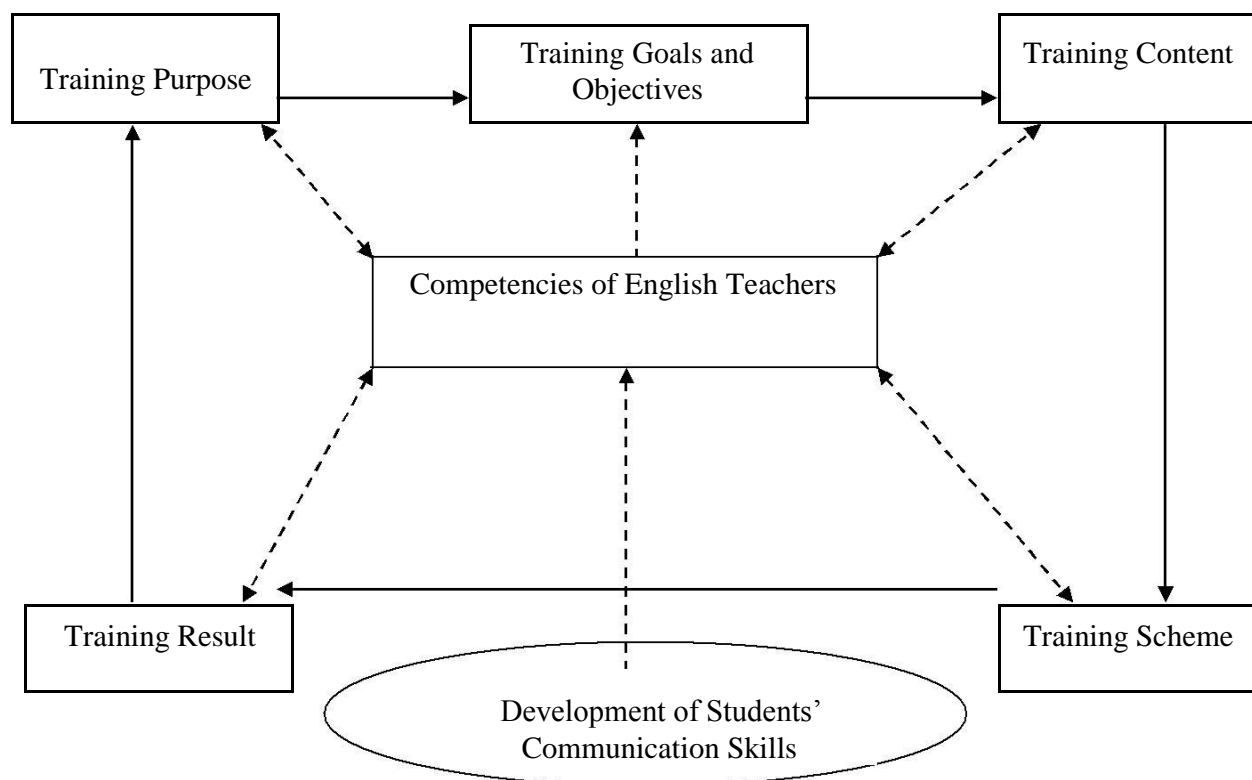
accomplish the training objectives. The wrap up and evaluation will help bridge the gap between training and implementation to summarize central concepts and themes.

Step five of Johns' model offers detailed information about designing and organizing learning activities so that outcomes identified by the objectives will be achieved. The next step involves creating a written document that provides a detailed plan of the training session including training goals and objectives.

This is to prepare a written training design. Step seven is described as preparing participant evaluation forms to determine the extent to which the training achieved its objectives and to identify adjustments to be made in the training design. Without follow up activities which is step eight of the model, the benefits of training may quickly be forgotten or never used. This step provides the continued support and feedback necessary for the successful implementation of new ideas and practices.

The researchers also based the key concepts of the research framework on the Systematic Approach to Training (SAT) which is similar to Seels and Glasgow's Instructional System Design Model (ISD). These models begin with Analysis. As the first phase, it rationalizes the necessity for the training. This phase can be likened to steps 1 and 2 of John's model. Next is the Design phase referred to as the decision-making phase. Also similar to steps 3 and 4 of John's model, this phase will complete three important activities: (1) deciding what participants will learn, (2) what will be taught and (3) the instructional methods to be used and what competency will be required from the participants. In the Development phase, the training concept is made into a material in the form of the training design with different parts. This is step 5 of John's model, of developing instructional activities. Both models refer the Implementation phase as the "actual training". This is where the developed training design will be put into a realistic context. Step 6 of John's model also refers to this as the training scheme preparation and implementation. Evaluation is listed last in these models. It ensures that processes work well and improvements are identified right away. Step 8 of Johns' model, preparing evaluation forms and determining follow-up activities discusses this also.

By combining the different concepts of the three theorists cited above, the researchers came up with the research theoretical framework shown below. Figure 1 illustrates in schematic form the theoretical components of this research.



**Figure 1:** The theoretical framework of the research

The concept of communicative competence to reorient teachers' perspectives in language teaching was an important basis in the design of the training plan. The arrows show the direction in the theoretical framework, with the development of communication skills of students situated outside of the framework. The last concept has an indirect relationship since the main concerns of the scheme are the teachers.

Communicative teaching was the main concept of the training content produced by this paper. Gonzales (2000) claims that the reason why Filipino speakers of English have not mastered the English tense system with the article system is that these systems have not been really understood and taught properly by teachers in the Philippines. This then is the need to reevaluate syllabi and teaching materials. If there is better programming of language materials and better training, then this can improve very well on the poor oral and written communication of college students.

This need is given more importance by Arroyo (2003) in a newspaper column who mandated that teachers' competence in English be measured through a competency test. She further stressed that teaching competence be given importance so that quality graduates will be produced in the new millennium.

The teachers' continued learning is indeed fundamental to the health of the profession and thereby to the quality of education experienced by students in schools. If policy aims to effect permanent, meaningful change in the practice of education, this implies understanding of and commitment to that change by individual teachers. Otherwise, it will run the risk of critical superficiality, subtle resistance and misrepresentation. If real change is the aim, then teachers' engagement with their own learning is essential (Venville, 1998). Teaching competence as the target of the design cannot therefore be overemphasized.

## Methodology

This research was conducted in Cagayan de Oro City with the 55 College of Arts and Sciences faculty members of Capitol University (CU) and Mindanao Polytechnic State College (MPSC) during school year 2003-2004. Non-random Selective sampling was employed in choosing the research populace of the study with total enumeration for the data collection.

Basically, the modified Analysis, Design, Develop, Implementation and Evaluation (ADDIE) ladder which was named Needs Analysis, Plan, Create, Try-out and Assess was adopted in the creation of the design. Through this, the format was then designed. Trainers were invited to conduct the tryout of the scheme on the respondents of this research. As to the assessment of the scheme, a set of evaluative procedures was modified based on Scott and Parry's evaluation scheme (1997).

In the needs analysis stage, baseline data were obtained from the respondents through the use of Focus Group Discussion (FGD) to gather the type of teaching strategies used in college English classes; the questionnaire for identifying the lesson objectives; the classroom observation which looked into the three parts of the lesson; and the analysis of the content of English tests.

Making use of the four extensive needs analysis procedures, the data were then analyzed. These were analyzed individually and entered in a matrix in the form of focus, rating and description. Final evaluation was derived through these three categories. The matrix showed commonality of results through simple frequency counts. Results served as basis for the production of the training scheme's learning segments.

To illustrate, the data gathered appeared in a matrix form as shown below.

Instrument	Variables Measured	Evaluative Description
FGD	Teaching Strategy	Communicative
Questionnaire	Lesson Objectives	Non-CLT
Class Observation	Strategy, Content, Evaluation	Non-CLT
Test Analysis	Tests, Textbooks, Work texts	Non-CLT

As shown in the matrix, there is a need to reorient English teachers' perspectives towards communicative teaching. The training scheme was designed to cater to this need. Its content outline appears as shown on the next page. Three experts then evaluated the designed training scheme composed of six learning segments. The table on the next page is a summary of the checklist for assessing the learning segments. The three respective trainers on a scale of 1-5 rated these. The scale is as follows: Very much – 5, Much – 4, Just enough – 3, Not much – 2, Not at all -1.

**Table 6:** Summary of the Trainers' Assessment of the Learning Segments

Item	T1	T2	T3
<b>A. FORMAT</b>			
1. General Appearance			
Is the material likely to appeal to the user's aesthetic sense?			
2. Component			
Does the material contain many components that the trainees will have Difficulty keeping track of them?			
3. Quality			
Did the researcher use high quality materials in the production process?			
4. Appropriateness of Illustrations			
Are the illustrations of the materials appropriate to the activities?			
5. Readability of the Material			
Is the material readable?			
<b>B. ORGANIZATION AND CONTENT</b>			
6. Approach			
Does the researcher use an approach consistent with the prescribed topic?			
7. Instructional Objectives			
Are the objectives compatible with the ones prescribed in the segment title?			
8. Scope and Sequence			
Is the scope and sequence of the material compatible with the time frame of the training?			
9. Assessment Device			
Does the material contain tests and other assessment devices that will help the trainees?			
10. Comprehensibility			
Will the material be clearly understood by the trainees and the trainer who will use it?			
11. Coordination with the Segment Topics			
Is the learning segment compatible with the other materials used in the Training?			
12. Individualization			
Does the design of the material allow trainers to use them differently according to trainees' needs?			
13. Length			
Is the material's length appropriate?			
14. Instructional Pattern			
Is the instructional pattern likely to excite the interest of the trainees?			
15. Management System			
Does the trainer easily manage the use of the materials?			
16. Role of the Trainees			
Does the material include interesting & rewarding activities?			
Does the material include activities that the trainees are capable of doing?			
Do they enjoy working with the material?			

Hence, the training design was refined on context of the stated results.

## Findings

After the results of the study were gathered, the following relevant points were seen.

### 1. Stages in the Development of the Training Design

To develop a training design for communicative teaching, the following stages were followed: Needs Analysis, Plan, Create, Try Out, and Assessment (NAPTCA) model. The analysis stage which made use of Focus Group Discussion, classroom observation, questionnaire and documentary evaluation of tests gave the researchers sufficient information on what competencies are needed by college English teachers to develop communication skills of students. The training design was fashioned based on the needed competencies of English teachers.

The results of the needs analysis showed that teachers needed to develop competencies in communicative teaching. Through this assessment stage, the needed competencies of teachers were discovered. Firstly, teachers are required to value the affective side of language learning. These teachers believed that students perceive language learning negatively since they observed that students either felt uneasy or tensed when asked to speak English. Also, teachers believed that they could not be blamed for these students who use un-English utterances. "When they come to college they are already made", a teacher commented. Moreover, teachers need an update on the essence of communicative teaching. The lecture method, one that is teacher-oriented was predominantly done in English classes. Very limited chances allowed for student talk. More importantly, teachers have to be exposed to the different strategies of communicative teaching. The Question and Answer technique was overused. If only they had observed strategies that really work, they would have used it in class. Another avenue that teachers obviously needed to acquire was to examine their course titles. By then, they would have seen what topics fit in the descriptive title of the course. There were several topics seen in the syllabus which twisted the idea given in the course title. English 1A for instance, a study and thinking skills course, focused solely on the parts of speech for its topics. Moreover, very common evaluative measure used to test students' skills was the paper and pencil test. Teachers should be more creative than adopting just one mind-numbing strategy. Therefore, they need exposure in communicative testing and assessment. By then, not only quizzes and tests will occur in English classes.

The development stage of the training design had for its baseline data the needs analysis. The design, in the form of segments, was then produced. Each segment contained a topic virtual to communicative teaching. The content of the training design was composed of topics, content, mode of delivery, strategy and evaluative procedure. Then, the implementation stage followed, actualized in the training of the college English teachers of Capitol University. The trainers who implemented the scheme were experts in the field of communicative teaching. Before the try out the trainers did a close examination of the segments. They took part in the development of the scheme since they brought materials for sample activities and valuable input. After the try out, the refinement of the scheme was done. This was based on the evaluation made by the trainers and trainees. During the training, the trainees evaluated the segments in the huddle sessions. The segment content and trainers' presentation of the learning segments were assessed. After the training, evaluation sheets were given to the participants of the training. They rated the totality of the scheme using the modified evaluation scheme of Scott and Parry (1997). Trainers were invited to conduct the try out of the scheme on the respondents of this research. As to the assessment

of the scheme, a set of evaluative procedures was modified based on Scott and Parry's evaluation scheme (1997). The comments served as basis for the revision of the learning segments. The content presentation of each learning segment contain strategies that promote active learning. This includes: brainstorming, cooperative group work, simulation and mini-lectures. A detailed plan of the training sessions was used to stay on track during the training event. Mid-course corrections were also made and training details likewise documented through snapshots and the use of video tape recorder.

## 2. Contents of the Developed Learning Segments

The training design was composed of six segments. The researchers chose the term segment to refer to the packet of materials that the trainers used. These were arranged in a sequence. The first learning segment had to be finished before they moved on to the next segment. The segments are discussed as follows.

Knowledge on the affective side of language teaching and learning was the first topic set. FGD showed that students perceived negatively the use of English. The English teachers were unmindful of this. This was clearly manifested during the classroom observation as well. They were not keen in developing the verbal potential of students. They allowed the use of first language in class. They even sometimes switch to the first language in explaining relevant points. Therefore, there was a great need to develop teachers' competence in guiding students to reorient them in developing their communicative abilities.

Knowledge of communicative teaching followed. Needs analysis showed insufficient student interaction in English classes. There was maximum teacher talk and minimum learner talk. Those teachers may have been aware of the goal of language instruction as the result of the FDG and questionnaire showed yet, another thing happened in their classes. They certainly needed to update their teaching strategy to pave the way towards communicative teaching.

Awareness of the needed communication skills of college students was next. Teachers focused only on developing one area of students' skills, the linguistic side. The other skill areas were taken for granted. It is not enough for the learner to develop his linguistic competence as observed in the English classes. He must develop his skills in manipulating this linguistic system to the point where he can use it spontaneously and flexibly in order to express his intended message. Since what occurred in the classes observed were very few instances for learners to communicate, the latter was not realized.

Then, How to revise syllabus for the designated course title subsequently came. Since work texts and lesson objectives did not necessarily promote communication skills of college students plus course descriptions do not fit the course syllabus, a topic on a look at current course titles and meanings need to be introduced. Hence, an application of communicative teaching strategies is needed to spotlight more on developing students' speaking potentials.

The Need for communicative testing and assessment was also included in the segment title. Tests made by English teachers disclosed minute opportunities for students to use the language spontaneously. Test tasks should reflect the attributes of the activity in real life that it was meant to replicate. Unlike the tests made, they talked about the tenses and other parts of speech. In the cloze test samples, the nth word deletion was not followed. They really needed training on this.

Lastly, a packet of instruction was prepared for the trainer. The trainer in conducting the training design will use this, as this will direct him/her on what to do in every training session. However, the design was designed for flexibility in that any trainer may add a technique, strategy, or input that will fit into the prepared design.

The training design produced was interactive. Any trainer who uses it may add to what had already been designed in the form of additional input or extra samples among others. The said training scheme was thus designed to meet the needs of college English teachers for them to develop students' communicative competence.

The planning of the scheme was made possible with the constant assistance of a languages expert, the researchers' mentor. The learning segments' topics came out after her thorough examination. With the topics already identified, the researchers went on to plan out the learning objectives for every learning segment and noted the competency measures for every training session.

## **Conclusions**

Taking the findings as strong points for evaluating this research, the following conclusions were drawn.

1. Various opportunities for student-talk should be provided in English classes. This calls for teachers' creativity in designing meaningful and communicative tasks. After all, communication is but the goal of language instruction. Hence, the usual Q and A technique may not be overused, as there are other strategies to choose from. The needs analysis showed that English teachers lack competencies. The activities provided in class did not encourage class interaction. They were the correct usage type if not rote memorizing of the rules of grammar. This therefore, made students more conscious to speak, as they had to think of the correct usage of verbs all the time.
2. Instruments such as FGD and questionnaire cannot be solely relied upon as baseline data in research. Some noted information did not actually happen in the classes observed. This shows that teachers were aware of the idea of communicative teaching but did not apply this in class.

## **Recommendations**

The following concepts are recommended as a result of the study.

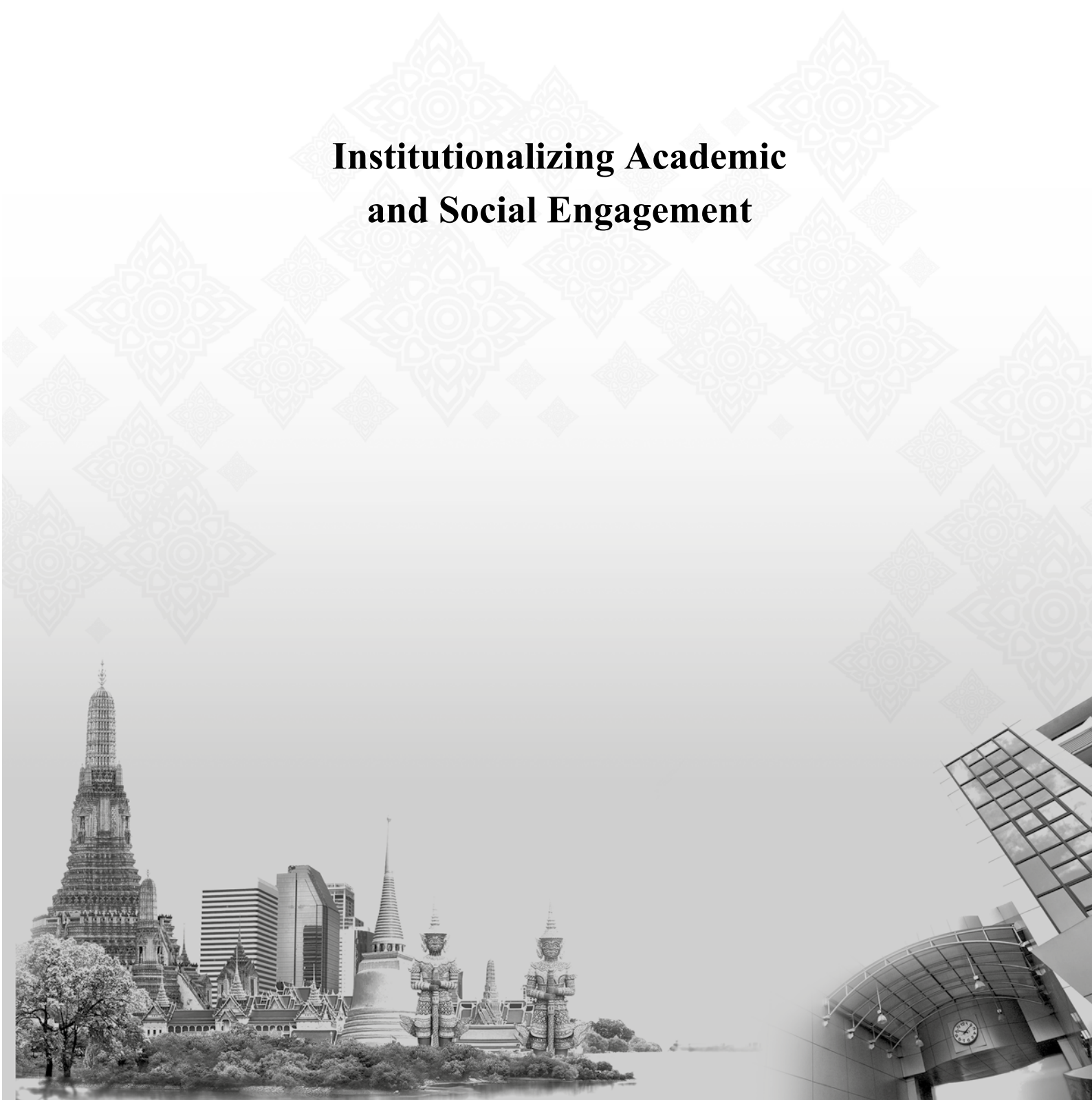
1. An experimental research may be conducted to test the effectiveness of the developed training design. This may be compared to other designs, with focus on the grammar approach to teaching English. Similarly, for the training content; too long content of segments may bore the readers/trainees. As such the presentations of concepts have to be capsulated in various formats.
2. Teachers need to attend trainings with the design showing the apportioning of the topics per day, with the assessment and activities built into topics. Hence, a designer should detail a training design so that a trainee who uses it will just follow. Moreover, trainings should be conducted on days other than Monday. Blue Mondays may hinder the participants to attend such important sessions. They may also be late, still unprepared because of the weekend's activities.

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# **Institutionalizing Academic and Social Engagement**





# Deconstruction of the CES Programs and Practices Using Carroll's Corporate Social Responsibility Model

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## Abstract

This study focused on the deconstruction of the Community Extension Services (CES) programs of selected Society of the Divine Word (SVD)-run higher institutions, namely: Divine Word College of Legazpi (DWCL), Holy Name University (HNU), and the University of San Carlos (USC) in the light of Archie Carroll's Corporate Social Responsibility Model. In addition, the study highlighted common and relevant services rendered by these concerned institutions to the communities in their respective localities. This was a descriptive study undertaken through survey method. The descriptive statistics were used to present and analyze the prevailing CES program of activities of the three higher institutions. The data were retrieved using researchers-made questionnaires. The purposive sampling method was used to identify the 102 respondents involved in the study. The respondents consist of the academic personnel, which includes the deans and department chairs, selected faculty members; the non-academic personnel, which includes heads of non-academic departments and the CES staff; and the student leaders of the three SVD-run higher institutions. The data revealed that these higher institutions have been involved in the community extension services through their CES programs. They have shown varied levels of effective implementation of the CES programs as well as the support of the administrators and the academic community members. The study further revealed the richness of the existing programs in carrying out CSR components through their extension services. The assessment made has significantly shown that the extension services programs generally portrayed socially oriented characteristics. Based on the findings the study was concluded that the three SVD-run higher institutions have implemented the CES programs grounded on the CSR orientation and directions.

**Keywords:** Deconstruction, Carroll's Corporate Social Responsibility Model, Economic, Legal, Ethical, Philanthropic Aspects

The call to heed the cry of the marginalized in the society has come along with the changing times. Particularly in the South East Asian countries, various policies have been formulated in order to address the need of the society through educational institutions. The colleges or universities in this case have to be part and parcel of societal development, along with the business and industrial sectors. The seminar workshop of ASEAN university representatives on social responsibility and sustainability (ASEAN University Network (AUN), 2010) in Chonburi, Thailand, particularly emphasized this concern. Higher education sector has also faced the need to change. Twenty-three universities in the ASEAN region attended, and the Philippines was represented by the University of the Philippines, De La Salle University, and Ateneo de Manila University. Interestingly, two key terms in the workshop were notably emphasized, i.e. Community and Social Responsibility. During the past few decades even CSR has been a growing interest in various educational organizations (Nejati,

Shafaei, Salamzadeh, & Daraei, 2011). Basically, the existence of an educational organization has a responsibility to heed the global call to serve the stakeholders and the community in general (Christensen, Thrane, Jørgensen, & Lehmann, 2009).

In the Philippine educational context, the Commission on Higher Education (CHED) mandates social responsibility in the form of the extension services of higher education institutions (CHED Memorandum Order [CMO] No. 08 s. 2008 pursuant to the “Higher Education Act of 1994” or the Republic Act No. 7722). The Commission articulated the objective of higher educational institutions to conduct extension services that are relevant and responsive to the need of the society. The mandate shows the academia’s trifold function of higher education as a prime mover of extension services, along with instruction and research (Ancheta, 2012), to help achieve better living conditions of the society.

**Corporate Social Responsibility (CSR).** The origin of CSR is a theory of Howard Bowen (1953), stipulated in his book, entitled: *Social Responsibilities of the Businessman*. He wrote that CSR refers to the obligations of businessmen to pursue policies and decisions for action aimed at people’s better life in the society. In the United States, as early as 1950s, the role of the corporation in society became subject to a more systematic debate; today, many consider Bowen’s book as a landmark contribution in the still ongoing debate on CSR (Carroll, 1999). Arguably, from this starting point, the US in particular led the debate on the roles and responsibilities of companies in society and by the 1970s a growing consensus on the understanding of CSR has emerged. The most longstanding and authoritative voice in this debate is that of Professor Archie Carroll, based at the University of Georgia designed the most established and accepted model of CSR, i.e. the ‘Four-Part Model of Corporate Social Responsibility’. It is a multi-layered concept, which are differentiated into four interrelated aspects, namely: economic, legal, ethical, and philanthropic responsibilities (Carroll, 1979; Carroll, 1991; Carroll & Buchholtz, 2008).

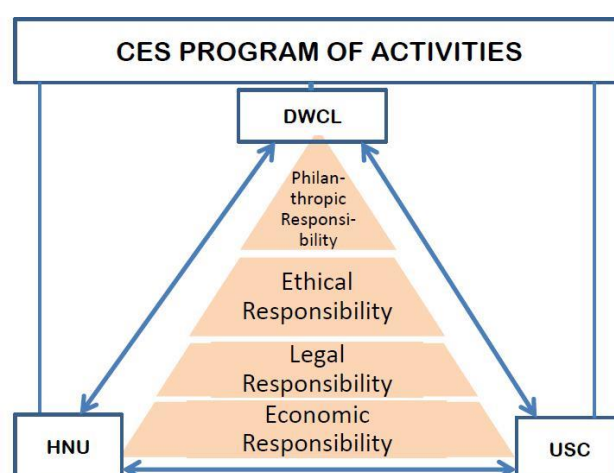
Emphasizing economic responsibility, Carroll (1991) further explained that the overall goal for running a business is to earn profits, hence to achieve the primary incentive for their entrepreneurship. In other words, the maximum profits are considered as the enduring value in their business operation. The business entities therefore consider themselves as providers of goods and services for the society. The next layer of the pyramid is the legal responsibility. This refers to business entities’ consideration to have legally binding business operations. As it is believed that the primary motive of business is profit, such a goal should be achieved through legal and acceptable means. It underscores fair business operation in the light of the prevailing laws as established by the lawmakers. The next layer in the pyramid of corporate responsibilities is ethical responsibility. This is concerned with the practices and activities which have not been codified into law, particularly the practice of the fair rules and policies in the society. Norms and values are basic elements in ethical responsibility, as these are used as the bases for the creation of the law. The last layer of the pyramid is philanthropic responsibility which, in essence, pertains to business entities’ concern with helping the people uplift their life conditions in the society through education, arts, or any development project activity. In short, through the CSR pyramid, Carroll presents the corporate responsibilities as consecutive layers, where the meeting of all the four levels consecutively occurred.

In the ASEAN context, the CSR has been successfully implemented, as this has contributed much to the betterment of life in the society. The Philippines and Indonesia have been known for such success (The Manila Times, June 19, 2008). These countries have made significant contributions to the development of the society where the business entities exist. Besides, in the Philippine context, it has already been tackled in the House of Representatives

(The Corporate Social Responsibility Act of 2009), demanding that corporations take much into consideration the activities that would have strong impact on the customers, employees, shareholders, communities, and the environment. Business companies should promote and foster sustainable economic development and environmental protection.

Much has been written about community extension programs and practices among HEIs in the Philippines, being one of its fundamental pillars. But there is no literature that deals with the community extension (CES) programs and practices, much less with CSR, particularly of the SVD-run college and universities. This seeming inadequacy and unavailability of CES literature in circulation inspired the researchers of this study to focus on the deconstruction of CES programs of activities of the three SVD-run higher institutions. It is then hoped that this study can contribute to the body of knowledge and would serve as reference for whatever related undertaking there may be in the future. Hence this study is centered on CES programs in the light of Carroll's CSR model. Further, this study attempts to deconstruct the extension services programs and practices of Divine Word College of Legazpi City (DWCL), Holy Name University (HNU) in Tagbilaran City, and University of San Carlos (USC) in Cebu City in the light of the Carroll's CSR Model. Specifically the study is focused on answering the following questions: 1) What are the CES programs of DWCL, HNU and USC which serve as guiding posts in the delivery of services to their respondent communities? 2) What is the extent of implementation of the present CES programs in the light of Carroll's CSR Model?

The Conceptual Framework of the Research. The conceptual framework of this research is anchored on the Carroll's Pyramid of the Corporate Social Responsibility (CSR) (1991). Primarily the Community Extension Services program of activities of the three higher educational institutions of the SVD in the Philippines, namely: the Divine Word College of Legazpi (DWCL), the Holy Name University (HNU), and the University of San Carlos (USC), are categorically identified in line with Carroll's CSR Model. Carroll's CSR Model is a multidimensional construct, consisting of four layers of corporate responsibilities, namely: economic, legal, ethical and philanthropic. After the identification of the various activities performed by these higher institutions, the researchers scrutinized these activities' relevance in line with Carroll's CSR Model. As higher educational institutions run by the missionary congregation of the Society of the Divine Word, these schools observe close coordination and collaboration aimed at helping the people achieve the deserving quality life in their respective localities.



**Figure 1:** Conceptual framework of the study  
(anchored on Carroll's Pyramid of the CSR, 1991)

## Methods

**Research Respondents.** This study employed a purposive sampling method, where the 102 individuals who are directly involved in the CES program of activities of the three institutions are made respondents. They are composed of the academic personnel such as deans, department chairs, faculty members; the non-academic personnel such as the heads of non-academic offices and the CES staff; and the student leaders. The retrieved responses of the respondents were collated, which yielded the following distribution: 21 respondents (DWCL), 42 (HNU), and 39 (USC). These groups were given one week to answer the questionnaires, after which the data were collected, tabulated, interpreted, and analyzed.

### Research Instrument

A researchers-made instrument was used in gathering the data for this study. The first part of the questionnaires dealt with the different CES programs and services of DWCL, HNU and USC. The second part of the questionnaires was about the relevance of the institutions' CES program with that of Carroll's CSR Model. This part was intended to determine the limitations of the programs and services in the light of Carroll's CSR Model.

## Research Procedure

**Gathering of Data.** The researchers handed the questionnaires to the identified respondents of the three identified higher institutions. The respondents were given one-week time to answer the questionnaires.

**Treatment of Data.** All the responses of the respondents were encoded into EXCEL and were imported to IBM Statistic SPSS (Statistical Packages for Social Sciences) v. 17. The frequencies of the responses were obtained and the ranks were determined. To determine the effectiveness of the implementation of the program, the Mean and Standard Deviation were obtained and were interpreted accordingly. The bases for the interpretation follow the description in the following table:

**Table 1:** Numerical Scale, Confidence Limit for the Mean and Description

Numerical Scale		Confidence Limit for the Mean	Description
			Extent of implementations
5	Strongly Agree	4.50-5.00	Very High Extent
4	Agree	3.50-4.49	High Extent
3	Neutral	2.50-3.49	Moderate Extent
2	Disagree	1.50-2.49	Low Extent
1	Strongly Disagree	1.00-1.49	Very Low Extent

## Results and Discussion

There have been various CES activities performed by the faculty, employees, and students of the three SVD-run higher institutions. As reflected in Table 2, one of the CES programs is seminars and trainings, which ranked first. This may be attributed to the fact that as higher learning institutions, their organizations involved people who were equipped with adequate educational qualifications and capable of sharing their knowledge to the target communities. Being the easiest, this kind of service may be appealing to the school personnel

and students to share their knowledge and expertise for the people's professional development in the community (Albinsson & Arnesson, 2012).

Ranked second is tree planting and greening the environment. It is evident that these institutions are aware of the environment-related problems that are happening in the Philippines and even in the world today. In particular they find it necessary to take care of the environment. The respondents implement this program in line with the SVD congregational direction, that is, to protect the integrity of creation. Further, this is also a form of responses to the alarming environmental issues that endanger the society and the people, not to discount the pollution prevention and reforestation programs, and the proper waste disposal management.

**Table 2:** Community Extension Services

Community Extension Programs	F	Rank
Tutorial classes	68	4.5
Promotion of technical know-how and resources in enhancing learning	48	11
Skills training	60	8
<b>Seminars/Training</b>	<b>89</b>	<b>1</b>
Cultural heritage enhancement and promotion	31	15
<b>Tree planting and greening the environment</b>	<b>88</b>	<b>2</b>
Disaster risk prevention and management	45	12
Faith enhancement program	53	9
Values inculcation training	49	10
Community organizing	68	4.5
Welfare and safety	40	13
Financial management	26	16
Family life enhancement	39	14
<b>Livelihood promotion</b>	<b>70</b>	<b>3</b>
Microfinance project seminars	25	17
Legal information and assistance	22	18.5
Environment and natural resources management	62	7
Energy conservation program	22	18.5
Health care	64	6
Others	12	20

Duckworth and Moore (2010) observed that environmental issues are many times the sole focus of sustainability programs. There are four issues identified by the International Organization for Standardization (ISO 26000) with respect to environmental sustainability, namely: prevention of pollution, sustainable resource use, climate change mitigation and adaptation, and protection and restoration of the natural environment. Failure to take up these measures simply indicates the negligence of the organizations towards their roles relative to social responsibility. Sustaining an abundant ecology for future generation is of paramount goal. The Agency Group 09 (2010), following up President Obama's declaration for a government -wide greenhouse gas emissions reduction in the year 2010, found out that American businesses in the states and cities have helped forge the way and have shown that greening their operations is not only good for business but also for the environment.

In the Philippines more and more organizations are exhibiting organizational environmental involvement (OEI) (Abella & Yap, 2010). The OEI is a general term used to refer to practices that reduce the company's environmental footprint (i.e. using energy-saving

equipment) through environmental initiatives such as paperless transaction, using recycle materials, and through community involvement programs that target the development or rehabilitation of communities outside the organization, for example, participating in tree planting and cleanup drives.

Ranked third among the CES programs of SVD-run institutions is the livelihood promotion. The respondents found it necessary that people eat at least three times a day. This reality has been addressed by providing and promoting livelihood programs since many people in the community are unemployed. This observation runs similar to Bangladesh Rural Development Program in reaching out to the Bangladesh's "hardcore poor" when the elements of livelihood protection, delivered through food aid, is combined with livelihood promotion, delivered through skills training and microfinance programs (Matin & Hulme, 2003). Aside from the fact that people need to survive, this service is doable and realizable. This direction however must be compensated with eagerness and enthusiasm on the part of the beneficiaries in the target communities (Brocklesby & Hobley, 2003).

Presented in Table 3 is the summary of responses when the respondents were asked about the extension services and interventions they were engaged in. As shown in the table, the top 3 responses are *proper waste disposal management* and *mass feeding* (both Rank 1.5), and *immediate services to calamity-stricken groups* (Rank 3). The respondents find *proper waste disposal management* as one of the preferred services because it is somewhat relevant to protecting the environment. The proliferation of dengue cases among children, who were caught up in the school environment, added more pressure to the institutions' social responsibility. No wonder, Hajmohammad, Vachon, and Klassen (2013) declared that organizations are faced with increasing pressure to engage in sustainable development and to integrate environmental and social dimensions into their traditional performance metrics.

**Table 3:** Related Extension Services and Interventions

Extension Services and Interventions	Frequency	Rank
Assistance to physically handicapped individuals	32	12
Energy conservation	22	13
Child exploitation and molestation	14	15
Leadership training for potentials leaders	62	4
<b>Proper waste disposal management</b>	<b>72</b>	<b>1.5</b>
Aquatic resources management	13	16
<b>Mass feeding</b>	<b>72</b>	<b>1.5</b>
Prison/jail outreach	48	8
Literacy and values formation	61	5
Organizing BEC groups	35	11
<b>Immediate services to calamity-stricken groups</b>	<b>65</b>	<b>3</b>
Cleanliness and beautification	50	7
Promotion of religious formation and festivities	51	6
Parish-church involvement	47	9
Awareness and information on RH Bill	42	10
Land degradation and conversion issues	19	14
Others	3	17

As an expression of support to the livelihood promotion, those involved in the CES programs have also addressed the malnutrition problem of the community through mass

feeding . The existence of the medical courses in these institutions and the great number of malnourished children in the community surely contributed to the inclusion of mass feeding program in their community extension services and interventions. In addition, the country is always affected by natural disasters, which normally destroy the peoples' sources of livelihood. This phenomenon usually results in poverty and malnutrition among community residents. In response to this reality, mass feeding service becomes a part of and common to the extension program of the three institutions.

Furthermore, third in rank is immediate services to calamity-stricken groups. This is the schools' immediate response to those people in the community who are affected by typhoons, earthquakes, and the like. These services are not limited to providing food for the calamity-stricken community but also comforting them.

Because of rapid urbanization and industrialization, pollutions seem to be a major threat to human life and health condition. Tons of wastes abound locally and globally. McAlister and Ferrell (2010) averred that pollution causes health problems in humans, jeopardizes wildlife habitats, causes erosion, alters watercourses and can eventually poison groundwater supplies. With this kind of system, the issue of proper waste disposal management becomes a major concern in community extension services. McAlister and Ferrell further reiterated that in order to reduce pollution around the planet, all businesses have to be aware of and accept the responsibility to prevent the pollution problem. In addition, Burchell (2008) averred that enterprises within the framework of laws should provide adequate education and training to employees in environmental health and safety matters, including the handling of hazardous materials and the prevention of environmental accidents, as well as more general environmental management areas, such as environmental impact assessment and procedures, public relations, and environmental technologies.

Shown in Table 4 is the assessment of the respondents in terms of the effectiveness of their CES programs according to the given descriptive interpretations. Note that all items were rated close to 4.00 and they have the average mean of 3.86. This means that the respondents have observed high extent of effective program implementations. This was also consistent with their previous response, which considered their being fully aware of the environmental problems. This speaks of the high degree of participation of the faculty, the nonteaching employees, and the students in the implementation of the CES program.

**Table 4:** Assessment of the Community Extension Service Program

<b>Responsiveness or Effectiveness</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
Transformative program has been integrated immediately as a response to CHED Memorandum on community extension.	4.06	0.794	High Extent
Paradigm shift is taking place- from traditional program to socially and environmentally-oriented one.	4.01	0.814	High Extent
The degree of participation of the faculty, staff, students and administrators in extension services is progressing.	4.13	0.840	High Extent
The existing CES programs include socially and environmentally-oriented concerns.	4.25	0.949	High Extent
The CES collaborators (CES staff, students and department- representatives) are well motivated in programs' implementation.	3.79	0.871	High Extent
A livelihood program is initiated and consistently monitored.	3.51	1.032	High Extent
More and more student groups are involved in extension service - proof of being socially aware.	3.88	0.871	High Extent
Most of the CES programs are on literacy-formation and development.	3.68	0.834	High Extent

<b>Responsiveness or Effectiveness</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
Availability of technical resources and staff on extension is greatly felt.	3.72	0.883	High Extent
I believe that CES programs of our school are still heavily philanthropic in nature.	3.81	0.864	High Extent
There are visible proofs that our CES programs are creating impact due to the improvement of people's moral and economic life.	3.82	0.849	High Extent
CES programs and interventions rendered to the community are getting formative rather than momentary solutions.	3.70	0.793	High Extent
<b>AVERAGE</b>	<b>3.86</b>	<b>0.866</b>	<b>High Extent</b>

The three respondent institutions agreed that they deliver varied CES programs to the community; it has the average mean of 3.84, which means high extent of implementation. This shows that they were aware of their role in the community in this fast changing world. Awareness of the emerging realities coupled with concrete actions is embedded in their programs and are sure to yield an effect. Lawrence and Weber (2010) averred that it is proper for the institutions to identify relevant public issues that require attention and action. On the other hand one important benefit of the environmental awareness is the growing concern of the organizations towards the environment by reducing the risks posed by modern life to the planet (Golds, 2011). Their role is to deliver improvements that have a positive impact on the business. In addition, Kreitner (2004) reiterated that the concept of social responsibility has grown and matured to the point where many of the companies are intimately involved in social programs. These programs include everything from support of the arts and urban renewal to environmental protection. But like all aspects of management, social responsibility needs to be carried out in an effective and efficient manner.

Table 5 showed the personal and collective engagement of the CES volunteers. Most CES volunteers agreed to the statement The involvement and support of your key administrators in the planning contribute to a well delivered service. This statement got an average score of 4.09, the highest among all other statements. This result only tells us that CES volunteers saw how supportive the administrators and middle managers are in realizing their CES mission to support and contribute to a well- delivered service. Leading people to be high performers includes motivating and communicating with employees individually and in groups (Bateman & Snell, 2011). It involves day-to-day contact and working in teams, departments or divisions in order to realize the organizational goals (Kreitner, 2004).

**Table 5: Personal and Collective Involvement**

<b>Engagement of CES Volunteers</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
<b>The involvement and support of your key administrators in the planning contribute to a well-delivered service.</b>	<b>4.09</b>	<b>0.810</b>	<b>High Extent</b>
Solidarity and teamwork among CES staff and collaborators in the delivery of services is dominantly impressive.	3.81	0.898	High Extent
<b>The dedication and commitment of the CES collaborators are factors that lead to fruitful results.</b>	<b>4.02</b>	<b>0.923</b>	<b>High Extent</b>
The voluntary participation of CES representatives and collaborators are noticeable over the years.	3.82	0.872	High Extent
The programs are creating an impact due to consolidated efforts of CES collaborators.	3.72	0.837	High Extent
There is more participation among the community residents rather than dependency.	3.49	0.805	Moderate Extent
Resident- members are becoming conscious of the unified efforts of	3.73	0.773	High Extent

<b>Engagement of CES Volunteers</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
school's collaborators due to good teamwork.			
There is a better coordination between the concerned departments and the CES office.	3.85	0.894	High Extent
There is an on-going linkage between the CES staff and collaborators specifically the student sector	3.82	0.801	High Extent
Regular involvement of students groups to adopted communities is notably being sustained.	3.80	0.845	High Extent
Constant monitoring of activities to adopted communities by staff and collaborators is on- going.	3.85	0.849	High Extent
Regular meetings and assessment of CES programs and results by staffs, students and departments' collaborators.	3.75	0.872	High Extent
<b>AVERAGE</b>	<b>3.81</b>	<b>0.848</b>	<b>High Extent</b>

Second in the list was The dedication and commitment of the CES collaborators are factors that lead to fruitful results, which got a mean of 4.02. CES volunteers discovered that dedication and commitment of CES volunteers are an equally important requirement for success in CES activities. Along this line, people who are taking the lead in this particular mission of the institutions should assume great social responsibility, which can be achieved mainly through proaction. Proaction involves formulating a program that serves as a role model by which the institutions can aggressively take initiatives convincingly and committedly (Kreitner, 2004).

**Table 6:** Community Extension Services of SVD-run Higher Institutions in Terms of: Economic Aspect

<b>On Economic Aspect</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
Promotion of microfinance business or project as an example of livelihood program is in progress.	3.23	1.014	Moderate Extent
Extending lecture-education on culinary, health, etc.	3.75	0.951	High Extent
Existence of livelihood program is being maintained.	3.47	0.962	Moderate Extent
Technical and agricultural programs for recipients are presently in place.	3.03	0.949	Moderate Extent
<b>AVERAGE</b>	<b>3.37</b>	<b>0.969</b>	<b>Moderate Extent</b>

Table 6 showed the services of the CES programs of the institutions in the related area of economic concerns. Carroll's (1991) idea on economic responsibility was anchored on the view that the society expects businesses to produce goods and services and sell them for a profit. Inspired by this principle, these higher institutions promote their CES activities anchored on the mission of enabling the society to work for profitable business activities. As reflected in the aforementioned table, the economic aspect of the CES programs has an average mean of 3.37. This implies that the respondents have observed a moderate extent of implementation of the economic aspect of the CES program. The outcome is worth noting. It shows that the services provided are not purely in terms of the communities' productivity at hand. The nature of the institutions involved comes into the fore right away. Generally the existence of the institutions does not directly yield implications for better economic development of the society. The roles of the higher educational institutions are obviously meant to provide educational services to develop the people toward productivity. In the context of community extension services, the implementers do their share through lectures, seminars, and the like. The economic responsibility may also extend to offering certain products to needy consumers at a reduced price (Bateman & Snell, 2011). So, the parallel products provided by the institutions are such that their faculty and even students can serve as human resources in various areas in

need of their qualifications and expertise. They will assume the role, too, of a competent and effective workforce, which will make an impact in the societies to which they belong. Some of them have been able to benefit from their own schools' scholarship program and corporate responsibility.

**Table 7:** Community Extension Services of SVD-run Higher Institutions: Legal Aspect

On Legal Aspect	Mean	Std. Deviation	Interpretation
Legal assistance is constantly offered to the underprivileged who are securing help and protection.	2.93	1.119	Moderate Extent
Protection and provision of legal assistance for those who are experiencing exploitation and manipulation.	2.85	1.120	Moderate Extent
On-going assistance for those who are lobbying for certain humanitarian advocacies (security and safety for the displaced families due to calamities).	3.03	1.156	Moderate Extent
<b>AVERAGE</b>	<b>2.94</b>	<b>1.014</b>	<b>Moderate Extent</b>

As can be gleaned from Table 7, the extension services in terms of legal aspect did not significantly differ from those of the economic aspect. This also indicates that the CES activities within this aspect are not given so much emphasis. However, just as society expects business to follow the law in earning profits, so the extension services, in fulfilling their economic mission, should help the society work for profit following the requirements of the law. However, as reflected in this table, the legal aspect has only the average of 2.4, which means moderate extent. This outcome seemed to be understandable because the services of the institutions are not basically legal in orientation. Through their CES programs the institutions are promoting collaboration and the spirit of volunteerism among the school-based workers. This result, however, serves as an eye opener to the institutions' leaders to consider more deeply what they can start within their organizations and among their own people even before they can extend the same regard to the people outside their institutions as part of their community extension services. This is the other side of the responsibility that an institution assumes for the society. But the fact that the existing institutions are already operating with all of their freedom and privileges presupposes that compliance with the laws has already been met (Bateman & Snell, 2011).

Reflected in Table 8 are community extension services in relation to the ethical aspect. In Carroll's writings (1979, 1991, 1999) the higher element of social responsibility came to his attention, that is, the ethical responsibility. Carroll emphasized that business entities should work beyond the economic and legal obligations in order to earn profits. They have to advance the ethical consideration in the operation of their businesses, which represents the behaviors, values, and ethical norms of the society. It is quite significant to have this principle anchored in the practice of the extension services of these higher institutions. Results showed an average mean of 3.61, which means that a high ethical level is observable in the implementation of the CES programs of activities. The respondents believed that establishing a healthy relation among the residents of the community through CES activities would eventually help them develop and succeed.

**Table 8:** Community Extension Services of SVD-run Higher Institutions: Ethical Aspect

On Ethical Aspect	Mean	Std. Deviation	Interpretation
Promoting and facilitating a healthy relationship among community residents.	3.76	0.786	High Extent
Training programs in enhancing personal dignity and moral uprightness within the community.	3.57	0.885	High Extent

Promotion of peace and the culture of life are taking place and on-going in the communities served.	3.62	0.833	High Extent
Promotion of support system and responsibility among the members of the resident-members.	3.60	0.882	High Extent
Formation of BEC through available CES activities.	3.50	0.876	High Extent
<b>AVERAGE</b>	<b>3.61</b>	<b>0.852</b>	<b>High Extent</b>

It is an inherent reality that it is the people's relational behavior, which leads to the promotion of an association among themselves. However, McAlister and Ferrell (2010) observed that as more companies view themselves as responsible to the community, the more they will contemplate their role and the impact of their decisions on communities from the ethical perspective. Business leaders are increasingly recognizing the significant role their firms play in the community and the need for their leadership in tackling community problems. They must agree that the relationships should be nourished and nurtured as a key to better partnership in dealing with community concerns.

Table 9 showed the results of the community extension services in relation to the philanthropic aspect. The focus of philanthropic responsibility (Carroll, 1979) emphasizes the role of the business to promote the human welfare or goodwill of the citizens in the society. These initiatives are left to the judgment of the individual or corporation manager; however, they should be driven by the existing social norms. Normally, such philanthropic acts are channeled through education, arts or community development projects. Shed by the same light, the three higher institutions render their extension services with an average mean of 3.92, which means that a high extent of implementation of the CES program of activities was observable among the respondents. It is common knowledge that academic scholarship is one of the many committed services that the three respondent institutions are indeed extending to poor and deserving students. A great number of their students enjoy this privilege. On top of this kind of corporate responsibility that is embedded in the entire system, there are also specific and unique social responsibilities that the institutions are extending, hereby referred to as philanthropic services.

**Table 9:** Community Extension Services of SVD-run Higher Institutions: Philanthropic Aspect

<i><b>On Philanthropic Responsibility Aspect</b></i>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
Availability of resources as well as volunteers in assisting help at all times in and out of campus.	3.86	0.797	High Extent
Availability of medical care and assistance through regular Medical Mission.	3.59	0.979	High Extent
Promotion of technical knowledge and resources through Literacy Program by the CES collaborators.	3.93	0.774	High Extent
Extending professional and social services through the use of venues and facilities of the school.	4.08	0.864	High Extent
Scholarship program to poor and deserving students.	4.20	0.934	High Extent
Scheduled Mass feeding for those who are deprived of regular meals.	3.88	0.915	High Extent
<b>AVERAGE</b>	<b>3.92</b>	<b>0.877</b>	<b>High Extent</b>

Byars and Rue (2007) affirmed that a company demonstrates its sense of social responsibility by contributing time and money to charitable, cultural, and civic organizations. Corporate philanthropy, or efforts to improve human welfare, can take many forms. Some corporations allow employees time off to donate blood, participate in food and clothing drives, or raise money for such causes. Many corporations also donate money by matching the

charitable donations made by their employees. In this way companies encourage employees both to give and make their own contributions to philanthropic causes.

Table 10 summarizes the results of the CES programs of the three respondent institutions with regard to their services and interventions using Carroll's CSR Model as a reference. It can be noted that the results of the first two aspects (*economic* and *legal*) are similar, since both are moderately implemented, while the remaining two (*ethical* and *philanthropic*) are assessed as highly implemented.

**Table 10:** The General Overview of the CES Programs in the Light of Carroll's CSR Model

CSR Aspects	Average	Std. Deviation	Interpretation
Economic Aspect	3.37	0.969	Moderate Extent
Legal Aspect	2.94	1.014	Moderate Extent
Ethical Aspect	3.61	0.852	High Extent
Philanthropic Responsibility Aspect	3.92	0.877	High Extent
<b>AVERAGE</b>	<b>3.46</b>	<b>0.928</b>	<b>Moderate Extent</b>

With these results, and as far as the nature of the services and personal assessments of the schools' service programs are concerned, these educational organizations are meeting their economic responsibility when they earn a profit through the provision of goods and services desired by customers (Schermerhorn, 2008). Legal responsibility is fulfilled when the organizations operate within the law and according to the requirements of various external regulations. The organizations meet their ethical responsibilities when their actions voluntarily conform to the broader values and moral expectations of society. The highest level of social performance comes through the satisfaction of philanthropic responsibility. Here they voluntarily move beyond basic economic, legal, and ethical expectations to provide leadership in advancing the wellbeing of individuals, communities, and society as a whole. These institutions have the mission to contribute to the people's advancement for a decent living. Such conformity is found among Carroll's CSR Model components. As far as economic and legal responsibilities are concerned, the schools have been complying with their share. As to the ethical and philanthropic components, the organizations are complying with their commitment to the stakeholders and the wider community. At present the schools are undertaking many projects to facilitate the development of people, environment and livelihood programs. These activities are ongoing to facilitate the involvement of the entire faculty, staff, and students for integral learning and development. Besides, the wider community expects them to be shapers of people's lives and agents of transformation in the community.

## Conclusion

In general, the survey results show that the three SVD-run institutions do not only have similar activities but are also actively involved in their CES programs. Specifically, their programs containing specific services manifest some degree of social and environmental consciousness on global and local issues. Various activities are initiated to promote environmental protection and preservation, as well as food aid and livelihood skills training. The good teamwork and coordination of administrators and all academic community members were fully recognized through their services and community involvement. The results implicitly show, too, how varied was the extent of implementation of the programs, giving a glimpse of their CSR components. There were some similarities in the practices and interventions between CES practices and Carroll's CSR Model, but their implementation is not yet exactly the same with reference to Carroll's multi-layered construct.

It is recommended that through this study, the three respondent institutions should see the need to render their services to the community in the light of the economic, legal, ethical, and philanthropic contexts. In the economic aspect, it is recommended that the institutions share with the society their skills and expertise in accordance with the people's livelihood in the area of agriculture and small business enterprises. In the legal aspect, the institutions are called to equip themselves with such legal competence as to advance the people's knowledge of the legal process and thus uplift the quality of their life. Both in the ethical and philanthropic aspects, the higher institutions are called to maintain, if not to increase, the quality of their services to the community. Further, having varied community backgrounds, separate study and analysis of each individual institution on the CES program implementations, by involving CES beneficiaries is recommended in order to have better grasp on the CES program implementations in specific contexts. This will also serve as better response of institutions' social responsibility toward the strengthened and sustained community services, and in order to come up with a workable CES Model that would involve and lead the corporate citizens of the institutions to be fully aware of their services and practices in the communities they serve.

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# Student Satisfaction of Academic Services and Campus Climate

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## Abstract

This descriptive study determined student experiences associated with their expression of satisfaction. *Student Satisfaction Inventory* was administered. Four hundred (400) students completed the survey on three institutional areas: student, academic, and campus services. Results included: 1) In terms of student and academic services, and campus climate, majority responded from “moderately satisfied” to “satisfied” as an entire group and when grouped as to different categories except in parking that indicated “less satisfied.” 2) No significant differences existed with student satisfaction on admission, accounting services, enrolment, when grouped according to sex except on campus services. Significant differences on admission, accounting, and campus services were noted when students were grouped as to residence and college. No significant differences were noted on admission and campus services as to college. No significant differences were noted with student and accounting services as to year level. 3) Significant difference was noted in student satisfaction with academic services when grouped according to sex. No significant differences were noted when students were grouped according to residence and college but significant in instructional effectiveness with the same variables. Significant differences were noted in their satisfaction with academic services in terms of year level. 4) No significant differences existed in their satisfaction with campus climate but significant in terms of parking when grouped according to sex. No significant differences existed in their satisfaction with campus climate when grouped according to residence. Significant differences existed in their satisfaction with campus climate when grouped according to college. No significant differences existed in their satisfaction with campus climate but significant in terms of parking when grouped according to year level.

**Keywords:** Student Services, Academic Services, Campus Climate, Student Satisfaction

## Introduction

To ensure that universities can maintain their high standards, assessing students are resorted to in order to provide a way to focus directly on issues of quality development (Wiers-Jenssen, Stensaker, & Grogard, 2002). Measures of student satisfaction can also assist in identifying and implementing areas for development. Universities initially set up satisfaction surveys to serve two purposes: to help administrators monitor teaching quality and to help teaching staff improve on their teaching. University student satisfaction surveys are being used today in more ways than ever before (Kulik, 2001).

Many teachers approve of the increased use of satisfaction surveys in universities. In fact, teaching staff views these surveys as reliable and valid measures that bring methodical precision to the evaluation of teaching. However, not all teachers share this view. Some teachers view students’ satisfaction surveys as meaningless quantification. Teaching staff fear that students too often abuse this anonymous power to get even or get back at teaching staff

and warn that satisfaction surveys may turn the evaluation of effective teaching into a personality contest (Kulik, 2001).

Thomas and Galambos (2004) argue that students are regarded as consumers of higher education. University students' satisfaction is important to institutional success in that effective institutions have satisfied 'customers' because this satisfaction supports the enrolment of additional students or 'customers'. In this light, determining student satisfaction can be useful to academic institutions. This can help them point out their strengths and work on their weak areas.

## **Statement of the Problem**

This study determined which features of students' experiences are associated with their expression of satisfaction. Information can be gleaned and actions can be taken to maintain high levels of satisfaction and thus improve student learning. This addressed the following questions:

What is the USA students' satisfaction with student services in terms of: admissions; accounting services; Campus services - cafeteria, medical clinic, dental clinic, library, guidance, sport, and bookstore – and enrolment as an entire group and when grouped according to sex, residence, course, and year level?

What is the USA students' satisfaction with academic services in terms of: academic services like grading and instructional effectiveness to include quality of teaching as an entire group and when grouped according to sex, residence, course, and year level?

What is the USA student satisfaction with campus climate in terms of: Campus climate, Student centeredness, and safety, security, and parking as an entire group and when grouped according to sex, residence, course, and year level?

Are there significant differences in the USA student satisfaction with student services in terms of: admissions; accounting services; Campus services - cafeteria, medical clinic, dental clinic, library, guidance, sport, and bookstore – and enrolment as an entire group and when grouped according to sex, residence, course, and year level?

Are there significant differences in the USA student satisfaction with academic services in terms of: academic services like grading and instructional effectiveness to include quality of teaching as an entire group and when grouped according to sex, residence, course, and year level?

Are there significant differences in the USA student satisfaction with campus climate in terms of: Campus climate, Student centeredness, and safety, security, and parking as an entire group and when grouped according to sex, residence, course, and year level?

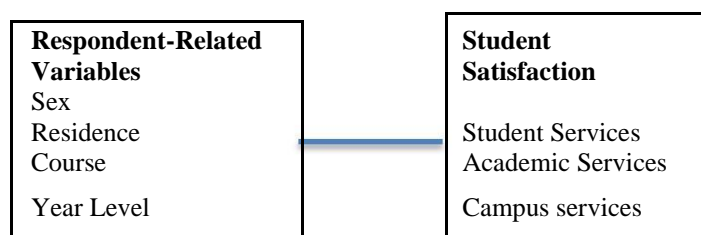
## **Hypotheses**

There are no significant differences in the USA student satisfaction with student services in terms of: admissions; accounting services; Campus services - cafeteria, medical clinic, dental clinic, library, guidance, sport, and bookstore – and enrolment as an entire group and when grouped according to sex, residence, course, and year level.

There are no significant differences in the USA student satisfaction with academic services in terms of: academic services like grading and instructional effectiveness to include quality of teaching as an entire group and when grouped according to sex, residence, course, and year level.

There are no significant differences in the USA student satisfaction with campus climate in terms of: Campus climate, Student centeredness, and safety, security, and parking as an entire group and when grouped according to sex, residence, course, and year level.

## Conceptual Framework



**Figure 1:** The Schematic Presentation of the of Study

## Significance of the Study

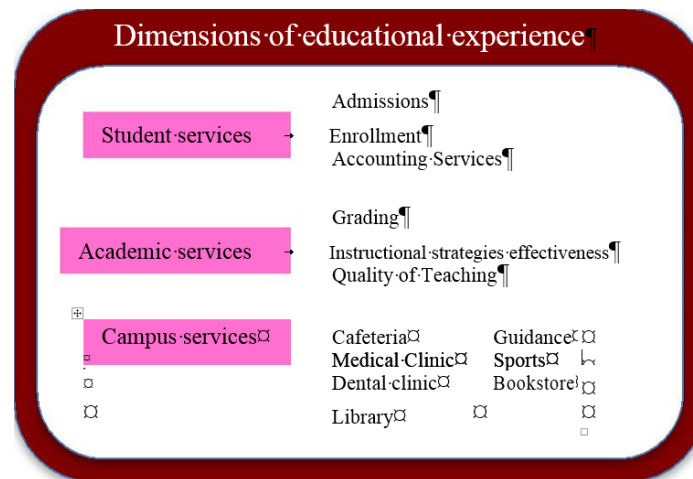
The administrators can make overall statements about students' satisfaction of the institution's services and that they can take necessary actions to sustain such satisfaction and institute actions to address dissatisfaction.

The faculty can be provided with baseline information in order to explore more on the dimensions of teaching to enhance student satisfaction.

Students can benefit much from their educational experiences inasmuch that the study can bring about educational reforms for their benefit.

## Methodology

This study involved the quantitative research design and made use of the survey. The *Student Satisfaction Inventory* was administered to students during the first semester, 2016-2017. Approximately there were 7,900 students and 400 completed the survey that gathers information related to three general institutional areas: 1) student services, 2) academic services, and 3) campus services. The three areas are further broken down into the following areas:



**Figure 2:** Dimensions of educational experience

## Respondents of the Study

Students in the University of San Agustin were used as respondents. The University of San Agustin (commonly referred to as San Agustin, San Ag, or USA) is a private Catholic university in Iloilo City, Philippines. In March 1953, San Agustin attained university status making it the first university in Western Visayas. San Agustin is the first and only Augustinian university in the Asia-Pacific region. They were categorized as to sex, residence, course, and year level. In order to choose them, cluster sampling was used. This is sampling technique in which clusters of participants that represent the population are identified and included in the sample (Jackson, 2011). Cluster involves cluster of participants that represented the population were identified and included in the sample.

## Research Instrument

This study made use of the Student Satisfaction Inventory. It consists seven7- eight (78) items that elicited students' satisfaction in these three institutional core areas such as 1) student services, 2) academic services, and 3) campus services.

This is a two-part research instrument. Part 1 generated students' demographics and Part 2 incorporated each of the areas mentioned above. The questionnaire is answerable by Very Satisfied (VS), Satisfied (S), Moderately Satisfied (MS), Less Satisfied (LS), Not Satisfied (NS).

Very satisfied (VS) means that the respondent is completely happy with the idea expressed in the item.

Satisfied (S) means that the respondent is happy with the idea expressed in the item.

Moderately Satisfied (MS) means that the respondent is somewhat happy about the idea expressed in the item.

Less Satisfied (LS) means that the respondent is not happy about the idea expressed in the item.

Not Satisfied (NS) means that the respondent is completely not happy about the idea expressed in the item.

## **Data Gathering Procedure**

The survey instruments were personally administered to the students who were selected using the Slovin formula. The Student Satisfaction Inventory was utilized. A research assistant was hired to assist in the administration and coding of the data derived from the questionnaires. Descriptive statistics was used to describe distributions and relationships between variables (Best and Kahn, 1998). The data gathered from the accomplished questionnaires was examined, classified, and analyzed according to the objectives of the study. Responses were tabulated, tallied, and interpreted using the following statistical tools: Mean, Standard Deviation, t-test, and the One Way Analysis of Variance (ANOVA).

## **Results**

### **USA Student Satisfaction with Student Services in terms of: Admissions; Accounting Services; Campus Services - Cafeteria, Medical Clinic, Dental Clinic, Library, Guidance, Sport, and Bookstore – and Enrolment as an Entire Group and When Grouped According to Sex, Residence, Course, and Year Level**

Results show that in terms of student services: admissions, the USA students were “satisfied” ( $m=2.51$ ) as an entire group and when they were grouped as to the different categories. Means ranged between 2.41- 3.2.

In terms of student services: accounting services, they were also satisfied ( $m=2.42$ ) as an entire group. However, the males, those living outside the city, those coming from the College of Commerce, College of Technology, and the Fourth Year were just moderately satisfied with the accounting services. Their means ranged from 0.81-1.6.

In terms of campus services: cafeteria, they were also satisfied ( $m=2.42$ ) as an entire group. However, the males and those coming from the College of Technology were just moderately satisfied with the cafeteria services. Their means ranged between 0.81-1.6

In terms of campus services: medical clinic, they were moderately satisfied ( $m=2.23$ ) as an entire group as well as with other categories except for those coming from the city, those from the CHAMP and CLASE. However, those coming from the College of Technology were less satisfied with the medical services.

In terms of campus services: dental clinic, they were moderately satisfied ( $m=1.61$ ) as an entire group as well as with other categories except the males, those outside the city, those coming from CHAMP, COC, CT, and the second years which indicated less satisfaction of the dental services.

In terms of campus services: library, the students were satisfied as an entire group ( $m=2.74$ ) as an entire group as well as with other categories except for those coming from the College of Technology which indicated moderate satisfaction only.

In terms of campus services: guidance, the students were moderately satisfied as an entire group ( $m=2.32$ ) as well as with other categories except for those coming from the city, those coming CHAMP, CLASE, and the third years who were satisfied of the guidance services.

In terms of campus services: sports, the students were moderately satisfied as an entire group ( $m=2.06$ ) as an entire group as well as with other categories except for those coming from the College of Technology which indicated less satisfaction.

In terms of campus services: bookstore, the students were satisfied as an entire group ( $m=2.56$ ) as well as when they were categorized into the different categories.

In terms of campus services: enrolment, the students were satisfied as an entire group ( $m=2.48$ ) as well as when they were categorized into the different categories except for those coming from CHAMP and the second years that indicated moderate satisfaction ( $m=2.37$ ;  $m=2.39$ ) respectively.

### **USA Student Satisfaction with Academic Services in terms of: Grading and Instructional Effectiveness to Include Quality of Teaching As An Entire Group And When Grouped According to Sex, Residence, Course, and Year Level**

Results show that in terms of academic services: grading, the USA students were moderately satisfied ( $m=2.37$ ) as an entire group and when they were grouped as to the different categories. Means ranged between 2.41- 3.2. However, the males, those from CLASE, CT, and the third years were satisfied ( $m=2.49$ ;  $M=2.45$ ;  $m=2.49$ ) respectively.

In terms of academic services: instructional effectiveness, the USA students were satisfied ( $m=2.66$ ) as an entire group and when they were grouped as to the different categories. Means ranged between 2.41- 3.2.

### **USA Students' Satisfaction With Campus Climate in terms of Student Centeredness, Campus Safety and Security, and Parking as an Entire Group and when Grouped According to Sex, Residence, Course, and Year Level**

Results show that in terms of campus climate: student centeredness, the USA students were satisfied ( $m=2.66$ ) as an entire group and when they were grouped as to the different categories. Means ranged between 2.41- 3.2.

In terms of campus climate: security and safety, the USA students were satisfied ( $m=2.69$ ) as an entire group and when they were grouped as to the different categories. Means ranged between 2.41-3.2.

In terms of campus climate: parking, the USA students were less satisfied ( $m=1.41$ ) as an entire group and when they were grouped as to the different categories. Means ranged between 0.81-1.6. Those coming from CHAMP and CLASE were moderately satisfied with parking.

### **Differences in the USA Student Satisfaction with Student Services in terms of: admissions; accounting services; Campus services - cafeteria, medical clinic, dental clinic, library, guidance, sport, and bookstore – and enrollment as an entire group and when grouped according to sex, residence, course, and year level**

When grouped **according to sex**, results showed that there is no significant difference in the USA student satisfaction with students services in terms of *admission* when grouped according to *sex*,  $t(398)=-0.445$ ,  $p=0.657$ . A probability of 0.657 is greater than the level of significance which is 0.05.

Therefore, the null hypothesis must not be rejected. The USA student satisfaction with students' services in terms of *admission* does not vary as perceived by male and female respondents.

Results also revealed that there was no significant difference in the USA student satisfaction with students services in terms of *accounting services*,  $t(398)=0.424$ ,  $p=0.672$ . A probability of 0.672 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with student services in terms of *accounting services* does not vary as perceived by male and female respondents.

There was a significant difference, however, in the USA student satisfaction with students services in terms of *campus services*,  $t(398)=2.957$ ,  $p=0.003$ . A probability of 0.003 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with student services in terms of *campus services* varies in favor of female respondents.

In terms of enrolment, there was no significant difference in the USA student satisfaction,  $t(398)=0.017$ ,  $p=0.986$ . A probability of 0.986 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with students' services in terms of *enrolment* does not vary as perceived by male and female respondents.

When the students were **grouped as to residence**, a significant difference was noted in the USA student satisfaction in terms of *admission*,  $t(398)=2.151$ ,  $p=0.032$ . A probability of 0.032 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction in terms of *admission* varies in favor of respondents coming from the city.

A significant difference was also noted in terms of *accounting services*,  $t(398)=2.322$ ,  $p=0.021$ . A probability of 0.021 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. Student satisfaction in terms of *accounting services* varies in favor of respondents coming from the city.

*Campus services* was also significant  $t(398)=2.088$ ,  $p=0.037$ . A probability of 0.037 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with student services in terms of *campus services* varies in favor of respondents coming from the city.

When grouped **according to college**, there was no significant difference in the student satisfaction with students services in terms of *admission*,  $F(3,396)=1.712$ ,  $p=0.164$ . A probability of 0.164 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with student services in terms of *admission* does not vary as perceived by respondents coming from different colleges.

There was a significant difference in the USA student satisfaction with students services in terms of *accounting services*,  $F(3,396)=3.077$ ,  $p=0.028$ . A probability of 0.028 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with students' services in terms of *accounting services* varies grouped according to *college*. Post hoc results shows that significant difference existed in the satisfaction of respondents from CHAMP and CT in favor of CHAMP.

There was a significant difference in the USA student satisfaction with students services in terms of *campus services*,  $F(3,396)=15.060$ ,  $p=0.000$ . A probability of 0.000 is less than the level of significance, which is 0.05. Therefore, null hypothesis must be rejected. The USA student satisfaction with students' services in terms of *campus services* varies grouped according to *college*. Post hoc results shows that significant difference exist in the level of satisfaction of between respondents from CHAMP and CLASE in favor of CLASE, between respondents from CHAMP and CT in favor of CHAMP, between respondents from CLASE and COC in favor of CLASE, between respondents from CLASE and CT in favor of CLASE and between respondents from COC and CT in favor of COC.

There was no significant difference in the USA student satisfaction with students services in terms of *enrolment*,  $F(3,396)=1.519$ ,  $p=0.209$ . A probability of 0.209 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with student services in terms of *enrolment* does not vary as perceived by respondents coming from different colleges.

**In terms of year level**, no significant difference existed in the USA student satisfaction with student services in terms of *admission*,  $F(2,397)=1.156$ ,  $p=0.316$ . A probability of 0.316 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with student services in terms of *admission* does not vary as perceived by respondents coming from different year level.

No significant difference existed in the USA student satisfaction with student services in terms of *accounting services*,  $F(2,397)=0.759$ ,  $p=0.469$ . A probability of 0.469 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with student services in terms of *accounting services* does not vary as perceived by respondents coming from different year levels.

### **Differences in the USA Student Satisfaction with Academic Services in terms of: Academic Services Like Grading and Instructional Effectiveness as an Entire Group And When Grouped According to Sex, Residence, Course, and Year Level**

When the students were **grouped according to sex**, results showed that there was a significant difference in their satisfaction with academic services in terms of *grading*,  $t(398)=-2.838$ ,  $p=0.005$ . A probability of 0.005 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *grading* varies in favor of male respondents.

There was a significant difference in the USA student satisfaction with academic services in terms of *instructional effectiveness*,  $t(398)=-2.933$ ,  $p=0.004$ . A probability of 0.004 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *instructional effectiveness* varies in favor of male respondents.

**In terms of residence**, no significant difference was noted in the USA student satisfaction with academic services in terms of *grading*,  $t(398)=1.080$ ,  $p=0.281$ . A probability of 0.281 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with academic services in terms of *grading* does not vary as perceived by respondents coming from the city or outside the city.

**In terms of college**, results showed that there was no significant difference in the USA student satisfaction with academic services in terms of *grading*,  $F(3, 396)=1.576$ ,  $p=0.195$ . A probability of 0.195 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with academic services in terms of *grading* does not vary as perceived by respondents coming from different colleges.

Significant difference existed in the USA student satisfaction with academic services in terms of *instructional effectiveness*,  $F(3, 396)=2.900$ ,  $p=0.035$ . A probability of 0.035 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *instructional effectiveness* varies when the respondents are grouped according to college. Post hoc results show that significant difference existed in the level of satisfaction of between respondents from CHAMP and CLASE in favor of CLASE.

**In terms of year level**, results showed that there was a significant difference in the USA student satisfaction with academic services in terms of *grading*,  $F(2, 397)=3.106$ ,  $p=0.046$ . A probability of 0.046 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *grading* varies when the respondents are grouped according to year level. Post hoc results show that significant difference existed in the level of satisfaction of between respondents from 2<sup>nd</sup> year and 3<sup>rd</sup> year in favor of 3<sup>rd</sup> year.

There was a significant difference in the USA student satisfaction with academic services in terms of *instructional effectiveness*,  $F(2, 397)=10.212$ ,  $p=0.000$ . A probability of 0.000 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *instructional effectiveness* varies when the respondents are grouped according to year level. Post hoc results shows that significant difference existed in the level of satisfaction of between respondents from 2<sup>nd</sup> year and 3<sup>rd</sup> year in favor of 3<sup>rd</sup> year and between respondents from 4<sup>th</sup> year and 3<sup>rd</sup> year in favor of 3<sup>rd</sup> year.

#### **Differences in the USA Student Satisfaction with Campus Climate in terms of: Student Centeredness, Safety and Security, and Parking as an Entire Group and when Grouped according to Sex, Residence, Course, and Year Level**

When the students were **grouped in terms of sex**, results showed that there was no significant difference in the USA students' level of satisfaction with campus climate in terms of *student centeredness* when grouped according to *sex*,  $t(398)=-0.327$ ,  $p=0.743$ . A probability of 0.743 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with academic services in terms of *student centeredness* does not vary as perceived by male and female respondents

No significant difference was noted in the USA student satisfaction with campus climate in terms of *security*,  $t(398)=0.621$ ,  $p=0.535$ . A probability of 0.535 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA

student satisfaction with academic services in terms of *security* does not vary as perceived by male and female respondents

Results show that there is a significant difference in the USA students' level of satisfaction with campus climate in terms of *parking* when grouped according to *sex*,  $t(398)=2.449$ ,  $p=0.015$ . A probability of 0.015 is less than the level of significance which is 0.05. Therefore, null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *parking* varies in favor of female respondents.

**In terms of residence**, results showed that there was no significant difference in the USA student satisfaction with campus climate in terms of *student centeredness*,  $t(398)=1.596$ ,  $p=0.111$ . A probability of 0.111 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with academic services in terms of *student centeredness* does not vary as perceived by respondents coming from the city or outside the city.

No significant difference was also noted in the USA student satisfaction with campus climate in terms of *security*,  $t(398)=1.285$ ,  $p=0.199$ . A probability of 0.199 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with academic services in terms of *security* does not vary as perceived by respondents coming from the city or outside the city.

However, a significant difference was noted in the USA student satisfaction with campus climate in terms of *parking*,  $t(398)=2.498$ ,  $p=0.013$ . A probability of 0.013 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *parking* varies in favor of respondents coming from the city.

**In terms of year level**, results showed no significant difference in the USA student satisfaction with students services in terms of *campus services*,  $F(2,397)=1.260$ ,  $p=0.285$ . A probability of 0.285 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with student services in terms of *campus services* does not vary as perceived by respondents coming from different year level.

There was a significant difference in the USA student satisfaction with student services in terms of *enrolment*,  $F(2,397)=3.107$ ,  $p=0.046$ . A probability of 0.046 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with student services in terms of *enrolment* varies.

In terms of college, results showed that there was a significant difference in the USA student satisfaction with campus climate in terms of *student centeredness* when,  $F(3,396)=5.154$ ,  $p=0.002$ . A probability of 0.002 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *student centeredness* varies when the respondents are grouped according to college. Post hoc results shows that significant difference exist in the level of satisfaction of between respondents from CHAMP and CLASE in favor of CLASE; between respondents from CLASE and CT in favor of CLASE and between respondents from COC and CT in favor of COC.

Results show that there is a significant difference in the USA student satisfaction with campus climate in terms of *security*,  $F(3,396)=8.645$ ,  $p=0.000$ . A probability of 0.000 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *security* varies. Post hoc results show that significant difference exist in the level of satisfaction of between respondents from CHAMP and CLASE in favor of CLASE; between respondents from CHAMP and COC in favor of COC; between respondents from CLASE and CT in favor of CLASE and between respondents from COC and CT in favor of COC.

Results showed that there was a significant difference in the USA student satisfaction with campus climate in terms of *parking*,  $F(3,396)=6.880$ ,  $p=0.000$ . A probability of 0.000 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *parking* varies when the respondents are grouped according to college. Post hoc results show that significant difference exist in the level of satisfaction of between respondents from CHAMP and COC in favor of CHAMP; between respondents from CHAMP and CT in favor of CHAMP; between respondents from CLASE and COC in favor of CLASE and between respondents from CLASE and CT in favor of CLASE.

When **grouped as to year level**, no significant difference was also noted in the USA student satisfaction with campus climate in terms of *student centeredness*,  $F(2,397)=1.254$ ,  $p=0.286$ . A probability of 0.286 is greater than the level of significance which is 0.05. Therefore, the null hypothesis must not be rejected. The USA student satisfaction with academic services in terms of *student centeredness* does not vary as perceived by respondents from different year level.

A significant difference was noted in the USA student satisfaction with campus climate in terms of *security*,  $F(2,397)=3.462$ ,  $p=0.032$ . A probability of 0.032 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA students' level of satisfaction with academic services in terms of *security* varies when the respondents are grouped according to year level. Post hoc results show that significant difference existed in the level of satisfaction between respondents from 2<sup>nd</sup> year and 4<sup>th</sup> year in favor of 4<sup>th</sup> year.

A significant difference was also noted in the USA student satisfaction with campus climate in terms of *parking*,  $F(2,397)=3.462$ ,  $p=0.032$ . A probability of 0.032 is less than the level of significance which is 0.05. Therefore, the null hypothesis must be rejected. The USA student satisfaction with academic services in terms of *parking* varies when the respondents are grouped according to year level. Post hoc results show that significant difference existed in the level of satisfaction between respondents from 2<sup>nd</sup> year and 3<sup>rd</sup> year in favor of 2<sup>nd</sup> year.

## **Findings:**

Results show that in terms of Student Services, majority of the USA student responses ranged from “moderately satisfied” to “satisfied” as an entire group and when they were grouped as to the different categories.

Results show that in terms of Academic services, majority of the USA student responses ranged from “moderately satisfied” to “satisfied” as an entire group and when they were grouped as to the different categories.

Results show that in terms of Campus Climate, majority of the USA student responses ranged from “moderately satisfied” to “satisfied” as an entire group and when they were grouped as to the different categories except only in the parking where they indicated a less satisfied response.

No significant differences existed with USA student satisfaction on admission, accounting services, enrolment, when they were grouped according to sex except on campus services. Significant differences were noted however on admission, accounting services, and campus services when they were grouped as to residence. No significant differences were noted however, on admission and campus services when they were grouped as to college. Significant differences were noted in their satisfaction with student services in terms of accounting services when grouped according to college. No significant differences were noted with student services in terms of admission and accounting services in terms of year level.

Significant difference was noted in their satisfaction with academic services in terms of grading and instructional effectiveness when they were grouped according to sex. No significant difference was noted however when they were grouped according to residence and college but significant in instructional effectiveness with the same variable. Significant differences were also noted in their satisfaction with academic services: grading and instructional effectiveness in terms of year level.

No significant differences existed in their satisfaction with campus climate: student centeredness: security, but significant in terms of parking when grouped according to sex. No significant differences existed also in their satisfaction with campus climate: security, but significant in terms of enrolment and parking when grouped according to residence. Significant differences existed in their satisfaction with campus climate: student centeredness: security and when grouped according to college. No significant differences existed in their satisfaction with campus climate: student centeredness, security, but significant in terms of parking when grouped according to year level.

## **Conclusions**

USA needs to reevaluate its services so as to improve student satisfaction in terms of student services.

USA needs to reexamine its services so as to improve student satisfaction in terms of academic services.

USA needs to revisit its services so as to improve student satisfaction in terms of campus climate.

Residence and college of the students have got to do with their satisfaction of USA student services.

Sex and year level affect student satisfaction on academic services.

Significant differences were indicated in parking services which also got the least satisfaction among the students particularly when grouped as to sex and year level.

## Recommendations

For the improvement of this investigation, the following are recommended.

The study may lack variables that may be included to give depth to its interpretation in relation to students' experiences of university education, thus, other variables may be looked into to ascertain other sources of student satisfaction.

The university needs to evaluate its services periodically to validate the results of this investigation and to sustain student satisfaction.

Further studies to discover other factors that may usher student satisfaction.

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# **Time & Motion Study: Increasing the Efficiency of Employees in the University of San Agustin**

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## **Abstract**

A time and motion study is an efficiency technique (Taylor, 2010). Increasing the efficiency and effectiveness of service delivery is essential to organizational function and the delivery of instruction and other university-related services. The primary objectives were to determine the time spent to complete certain tasks in health services; determine the time spent to complete a certain task in the enrolment services, and determine the number of requests served vis-à-vis those not served in the General Services Office (GSO). Observation and recording exactly how much time was devoted to each task was done. Results showed that: The total time spent in all health services was 1869 minutes, an average of 85 minutes and range of 5-85 minutes. The total time spent in all enrolment steps was 51,287 minutes, an average of 384 minutes within the range of 1-660 minutes. ID Validation was noted to be the most efficient step in the enrollment processes. The General Services Office has served 70% of all total requests. The study concluded that: The time spent in the delivery of health services in the University is comparable with those of the reported international study; Something needs to be done in order to improve the enrolment process in the University as shown by the extreme dispersion of data. Variables and/or factors have to be ascertained why inefficiency occurred, and the 30% requests not served have to be addressed. There needs to be a Feed-backing Mechanism to be put in place.

**Keywords:** Time & Motion Study, Increasing Efficiency, University

## **Introduction**

Academic and non-academic personnel comprise human manpower in the university. Increasing the efficiency and effectiveness of service deliver in the university is essential to organization function and the delivery of instruction and other university-related services. This time and motion study was undertaken to provide a client-based information of how much time is spent by the academic and non-academic personnel in the delivery of the services in the university.

The primary objective of the study was to determine the time spent in the different service delivery to increase the efficiency of employees in the University of San Agustin.

Specifically, the study will:

determine the time spent to complete a certain task in health services as:

- medical,
- clinical, and
- dental laboratories services

determine the time spent to complete a certain task in the enrolment services as:

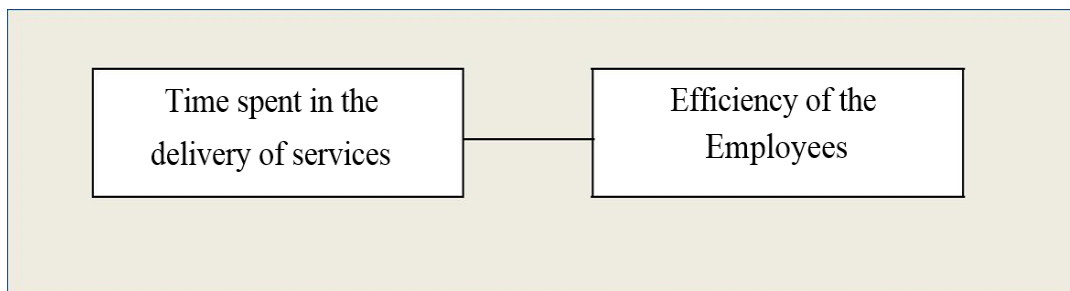
- Issuing Report Card
- Processing Clearance prior to enrolment
- Securing Sectioning Form and/or Enrolment Information Form (EIF)

- Paying required fees
- Evaluating EIF
- Paying down payment for tuition fees
- Validating ID
- Encoding and Issuing Registration Form

determine the number of requests served vis-à-vis those not served in the General Services Office (GSO) as:

- request for purchase
- request for repair
- request for services
- request for supplies

## Conceptual Framework



**Figure 1:** The schematic presentation of the study

## Significance of the Study

This study will be significant to the University of San Agustin in general, and to the clients in particular. This time and motion study serves as basis to improve the delivery of services and assure customer satisfaction. Specifically, this will be beneficial because:

knowing the average time a service is completed, the employees will be able to assess why inefficiency occurs and will be able to address the problem.

Efficient services indicated by the results of this study imply that employees are committed to their work and will be able to sustain such efficiency.

The results of this study can serve as benchmark for other organizations to emulate

This will serve as basis to find out whether employees are overworked or lack of manpower in the services offered by the organization.

## Research Methodology

This is a client-based observation study. The observation and recording were done to exactly determine how much time is being devoted to each task (Wirth et al., 2009). A series of recordings was undertaken in each of the tasks chosen randomly. Academic, non-academic personnel, and students were invited to participate in research protocols designed to assess how much time were devoted to each task.

## Data Management and Statistical Analysis

The statistical and technical methods to be used in this study were reported in detail. In brief, each department was subjected to data collection and observation. A statistician was hired

to investigate on the type of data to be collected and the statistical procedure to be undertaken in order to carry out this investigation.

In order to interpret the time spent to complete a certain task in the health services, enrolment services, and general services; the amount of time was measured by directly observing and recording the starting time the service was requested and the time when the services were served/terminated/availed.

To determine the time spent to complete a task in the health services, a Survey Form was given to patients entering the Medical, Clinical, and Dental Laboratories. Time starts as soon as the patient registers. After the patient has been served, the time is recorded.

To determine the time spent to complete a task in the enrolment services, a Survey Form was given to students who are going to enroll. They were instructed to indicate the time when they start queuing. In each of the steps, they have to indicate the time started and time ended.

To determine the number of requests served vis-à-vis those not served in the General Services Office (GSO), a Survey Form was given to the various offices, which availed of the general services. They were asked to indicate the description of the request, date requested, and date served.

## **Results**

### **Time Spent to Complete a Certain Task in Health Services: Medical, Clinical, and Dental Laboratories Services**

Table 1 shows the time spent to complete a certain task in health services such as medical, clinical, and dental.

In terms of medical services: physical examination, there were 11 patients. The total time spent was 519 minutes with a range of 12-85 minutes and an average time of 47 minutes.

In terms of medical services: check-up, there were 22 patients. The total time spent was 566 minutes with a range of 5-73 minutes and an average time of 26 minutes.

In terms of clinical services: blood chemistry extraction, there were 22 patients. The total time spent was 265 minutes with a range of 5-35 minutes and an average time of 12 minutes.

In terms of dental services: check-up, there were 2 patients. The total time spent was 13 minutes with a range of 5-8 minutes and an average time of 7 minutes.

In terms of dental services: tooth extraction, there were 6 patients. The total time spent was 65 minutes with a range of 6-15 minutes and an average time of 11 minutes.

In terms of dental services: prophylaxis, there were 18 patients. The total time spent was 171 minutes with a range of 5-20 minutes and an average time of 9 minutes.

**Table 1:** Time Spent to Complete a Task in Medical, Clinical, and Dental Services

Categories	N	Total Time	Range	Average Time
		(in minutes)		
A. Medical				
1. Physical Examination	11	519	12-85	47
2. Check up	22	566	5-73	26
B. Clinical	22	265	5-35	12
Blood chem (extraction)				
C. Dental				
1. Check up	2	13	5-8	7
2.Extraction	6	65	6-15	11
3. Oral Prophylaxis	18	171	5-20	9

Palmer (2013) in, The Case Against the Annual Check-up, has found out that in the United States, each visit takes around 23 minutes. The result implies that medical check-up in the University is more or less correlated with those done in the US. The discrepancy in the service delivery of check ups as emphasized in this same study was that, there are no standardized procedure for medical check-ups and so the time element can be affected by certain variables and/or factors that are inherent in the patient.

### **Determine the Time Spent to Complete a Certain Task in the Enrolment Services**

Table 2 shows the time spent to complete a certain task in enrolment services such as Issuing Report Card (Step 1), Processing Clearance Prior to Enrolment (Step 2), Securing Sectioning Form, and/or Enrolment Information Form (EIF) (Step 3), Paying Required Fees (Step 4), Evaluating EIF (Step 5), Paying Down Payment For Tuition Fees (Step 6), Validating ID (Step 7), and Encoding and Issuing Registration Form (Step 8).

Step 1: Issuing Report Card, there were 122 enrollees. The total time spent was 9218 minutes with a range of 2-480 minutes and an average time of 76 minutes.

Step 2: Processing of Clearance Prior to Enrolment, there were 151 enrollees. The total time spent was 7036 minutes with a range of 1-360 minutes and an average time of 47 minutes.

Step 3: Securing Sectioning Form, and/or Enrolment Information Form (EIF). There were 158 enrollees. The total time spent was 6804 minutes with a range of 1-270 minutes and an average time of 43 minutes.

Step 4: Paying Required Fees. There were 73 enrollees. The total time spent was 3759 minutes with a range of 2-240 minutes and an average time of 51 minutes.

Step 5: Evaluating EIF. There were 139 enrollees. The total time spent was 4798 minutes with a range of 2-240 minutes and an average time of 35 minutes.

Step 6: Paying Tuition Fees. There were 161 enrollees. The total time spent was 9046 minutes with a range of 2-420 minutes and an average time of 56 minutes.

Step 7: Validating Identification Card. There were 156 enrollees. The total time spent was 2080 minutes with a range of 1-120 minutes and an average time of 13 minutes.

Step 8: Encoding & Issuing Registration Form. There were 156 enrollees. The total time spent was 8546 minutes with a range of 3-660 minutes and an average time of 62 minutes.

**Table 2:** Time Spent to Complete a Certain Task in the Enrolment Services

STEPS	N	Total Time	Range (in minutes)		
			Minimum	Maximum	Mean
1. ISSUING REPORTCARD	122	9218	2.00	480.00	75.5574
2. PROCESSING CLEARANCE	151	7036	1.00	360.00	46.5960
3. SECURING SF/EIF	158	6804	1.00	270.00	43.0633
4. PAYING REQUIRED FEES	73	3759	2.00	240.00	51.4932
5. EVALUATING EIF	139	4798	2.00	240.00	34.5180
6. PAYING TUITION FEES	161	9046	2.00	420.00	56.1863
7. VALIDATING ID CARD	156	2080	1.00	120.00	13.3333
8. ENCODING/ ISSUING RF	138	8546	3.00	660.00	61.9275

Results further revealed that the longest step was on Step 1: Issuance of Report Card. It took an average time of seventy-six (76) minutes for an enrollee to finish the first step. This was followed by Step 8: Encoding and Issuance of Registration Form with an average time of sixty-two (62) minutes. The shortest step, Step 7: ID Validation took an average time of only thirteen (13) minutes. Among the students' reasons why there was delay in the issuance of Report Card were: Late encoding/Delayed submission of grades by the teachers and Poor system in the releasing of Priority Numbers. Another is on Step 6: Payment of Tuition Fees where students complain about lack of Priority Numbers and additional windows for payments.

## Determine the Number of Requests Served vis-à-vis those not Served in the General Services Office (GSO)

Table 3 shows the number of requests served against those services not served in the General Services Office (GSO). The University has not yet established a system in the context of the services done in this particular department.

In the request for purchase, this refers to those requests that are to be acquired outside the university. There were 39 requests and 85% of these requests were served.

In the request for repair, this refers to those requests requiring mending, restoring, renovating, etc. There were 50 requests and only 58% of these requests were served.

In the request for services, this refers to those requests like printing, installation, transfer of fixtures, and the like. There were 35 requests and only 51% of these requests were served.

In the request for supplies, this refers to those requests requiring acquisition of office supplies and fixtures for offices and chemicals and reagents for laboratories. These are internal acquisition requests. There were 13 requests and 85% of these requests were served.

**Table 3:** Number of Requests Served in the General Services Office (GSO)

Categories	n	% SERVED	% NOT SERVED
Request For Purchase	39	85	15
Request For Repair	50	58	42
Request For Services	35	51	49
Request For Supplies	13	85	15

Based in the data, it was quite difficult for the researcher to establish the time involved in all requests done through the General Services Offices because there is no established standard measure. In fact, as of this writing, the processes and steps done in the General Services have just commenced through the International Organization for Standardization (ISO). Furthermore, it is sad to note that there is no feed-backing mechanism in lieu of those requests that were not served.

## Findings

The total time spent in all health services was 1869 minutes, an average of 85 minutes and range of 5-85 minutes.

The total time spent in all enrolment steps was 51,287 minutes, an average of 384 minutes within the range of 1-660 minutes. ID Validation was noted to be the most efficient step in the enrollment processes.

The General Services Office has served 70% of all total requests.

## **Conclusions**

The time spent in the delivery of health services in the University is comparable with those of the reported international study.

Something needs to be done in order to improve the enrolment process in the University as shown by the extreme dispersion of data. Variables and/or factors have to be ascertained why inefficiency occurred.

The 30% requests not served have to be addressed. There needs to be a Feed-backing Mechanism to be put in place.

## **Recommendations**

There a need to conduct another time and motion study, which is employee based particularly on the same services, to further validate the results of this study as well as to establish an institutional standard on how these services will be delivered.

Research utilization must be done to assure that efficiency will be in place.

The General Services Office of the university - employees and clients – must establish a system like logging of requests indicating date and time requested vis-à-vis time and date served to objectively measure the efficiency in the delivery of general services.

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# **Organizational Politics and Psychological Empowerment: Empirical Evidence from a Private University in the Philippines**

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## **Abstract**

Organizational politics is an ubiquitous phenomenon among academic institutions and may be viewed negatively by academic personnel. When employees are psychologically empowered, the effect of organizational politics may be moderated. This study among selected academic personnel (n=117) of the University of San Agustin demonstrates how organizational politics is viewed, how it is translated in the workplace, and its effect on employee productivity. Results of this study revealed that the respondents have moderate levels of organizational politics and high level of psychological empowerment. The study further showed no significant differences in the level of organizational politics and psychological empowerment when the respondents were grouped according to age, educational attainment, work status, and length of stay in the university. A positive significant relationship exists between organizational politics and psychological empowerment.

**Keywords:** Organizational Politics, Psychological Empowerment, Private University, University of San Agustin

## **Introduction**

Workplace behavior is one of the concerns of leaders of the organizations nowadays. Interaction, harmony, and understanding among members of the organization are vital for the success of any organization. In an organization, members can work harmoniously with one another. Others may promote their own self-interests at the expense of other members or the goals of the organization, while others are passive followers of their leaders.

An institution of higher learning is one such organization that deals with people and has people to deal with. With the presence of people in an organization, it is imperative that organizational politics can be an ubiquitous phenomenon in any institution of higher learning. Organizational politics is an intentional behavior that are used to enhance or protect a person's influence and self-interest while also inspiring confidence and trust by others (Newstrom, 2011). According to McShane and Glinow (2013), "some of the political tactics of these self-serving behaviors maybe blatantly selfish and counterproductive" (p.308). Newstrom (2011) further explained that these political skills consist of four key dimensions, namely: being socially astute, having interpersonal influence, creating useful networks, and expressing sincerity. Employees who are experiencing organizational politics have lower job satisfaction, organizational commitment, organizational citizenship, and task performance, as well as higher levels of work-related stress and motivation to leave the organization (McShane&Glinow, 2013, p.308).

Although organizational politics may be viewed negatively by academic personnel, Colquitt (2009, p.451) pointed out that "leaders may need to push his or her own ideas and

influence others through the use of organizational politics.” He further explained that research showed that there are universities and some organizations that are training their future leaders to be attuned to their political environment and develop their political skill. Though there is the presence of organizational politics in an institution, and members may have the difficulty in controlling their own destiny, there is a need to empower the members of an institution.

Psychological empowerment, according to Spreitzer (1995) exists in an organization when employees perceive that they exercise some control over their work lives. It is not a fixed personality attribute but an intrinsic motivation manifested in four cognitions reflecting an individual’s orientation to his or her role. The four cognitions are meaning, competence, self-determination, and impact. Newstrom (2011) on the other hand, states that “empowerment provides greater autonomy to employees through the sharing of relevant information and the provision of control over factors affecting their performance” (p.195). It consists of the employees’ beliefs in the degree to which they influence their work environment, their competence, the meaningfulness of their job, and their personal autonomy (Robbins & Judge, 2012, p.40). Furthermore, Rappaport, (1981, 1984) stressed that “empowerment links individual strengths and competencies, natural helping systems, and proactive behaviors to social policy and social change” (as cited in Perkins and Zimmerman , 1995, p. 569). With the presence of organizational politics in an institution of higher learning, it is also believed that these employees should be empowered. It is in this context that this study was conceived. As members of this academic institution, it is important to investigate whether relationship between organizational politics and psychological empowerment exist in this academic institution.

## **Statement of the Problem and the Hypotheses**

This paper shows the political climate in the University of San Agustin, Iloilo City, Philippines. The study aimed to determine whether organizational politics and psychological empowerment of selected academic personnel of the University correlates with one another. Specifically it sought to answer the following questions:

- 1.What is the level of organizational politics of selected academic personnel in the tertiary level of the University when taken as an entire group and when grouped according to age, educational attainment, work status, and length of service in the University?
2. What is the level of psychological empowerment of selected academic personnel in the tertiary level of the University when taken as an entire group and when grouped according to age, educational attainment, work status, and length of service in the University?
3. Are there significant differences in the level of organizational politics among selected academic personnel in the tertiary level of the University when grouped according to age, educational attainment, work status, and length of service in the University?
4. Are there significant differences in the level of psychological empowerment among selected academic personnel in the tertiary level of the University when grouped according to age, educational attainment, work status, and length of service in the University?
5. Is there a significant relationship between organizational politics and psychological empowerment among selected academic personnel in the tertiary level of the University?

In view of the preceding problems, this hypothesis is advanced:

1. There is no significant relationship between organizational politics and psychological empowerment among selected academic personnel in the tertiary level of the University

## Research Framework

In any organization, the main assets are the smart, knowledgeable, and empowered employees. The work of Spreitzer on psychological empowerment and the presence of organizational politics in any organization, provided the bases for this study. Spreitzer (1995) believed that an individual's sense of purpose or personal connection to work, their feeling that the work is important and that he/she cares about it, his/her belief that he/she possesses the necessary skills and abilities to perform the assigned task well, and that each individual has a sense of freedom in the conduct of the task. On the other hand, work condition is also considered important especially in decision making. There are self-serving behaviors that members of the organization may manifest at the expense of others, or at times maybe contrary to the interests of the entire organization. After considering the importance of these two concepts, organizational politics and psychological empowerment, the researcher hoped to find out the levels of organizational politics and psychological empowerment among the selected academic personnel in the tertiary level in the university, as well as whether these two concepts are related to one another. The conceptual framework of the study is shown in Figure 1.

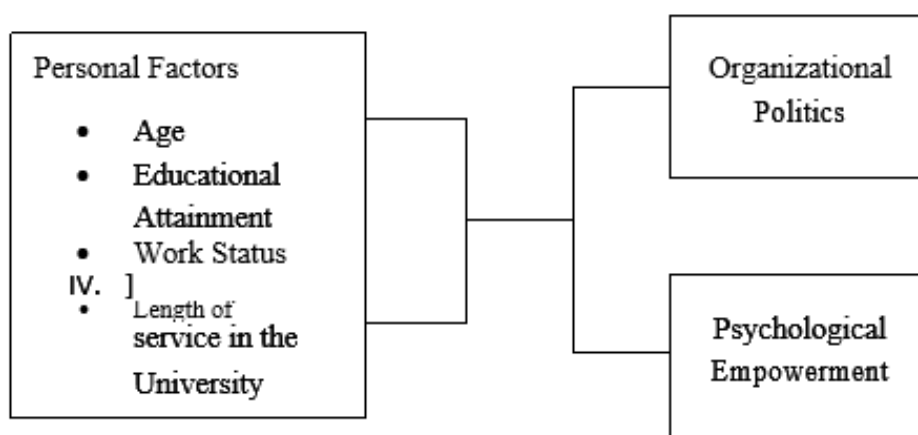


Figure 1. The Schematic Presentation of the Study

## Methodology

This is a descriptive research conducted among the selected academic personnel in the tertiary level in the University of San Agustin, Iloilo City. To make this investigation possible, a 3-part questionnaire was administered to one hundred seventeen (117) selected academic personnel. Part 1 of the questionnaire is the Personal background. From the personal information sheet, data such as age, educational attainment, work status, and length of service in the university were gathered. Part II is the questionnaire on organizational politics. It is a 15-item questionnaire adopted from the work of David A. Buchanan and Richard J. Badhman. All the items in the questionnaire were answerable with the following choices: "Disagree", "Maybe", and "Agree". The scoring system arbitrarily used by the researcher is as follows:

- 4.00 – 5.00 - Very high
- 3.00 – 3.99 - High

2.00 - 2.99 - Moderate  
1.00 - 1.99 - Low

Part III. Spreitzer Scale on Psychological Empowerment was adopted. It is a six (6) point scale with six (6) as the highest score and zero (0) as the lowest score. It is a 12-item questionnaire representing the four dimension of psychological empowerment, namely, meaning, meaningfulness, competence, self-determination, and impact. The scoring system used by the researcher is as follows:

4.50 - 6.00 - Very High  
3.00 - 4.49 - High  
1.50 - 2.99 - Moderate  
0.00 - 1.40 - Low

After the accomplished instruments were retrieved, the data gathered were tallied, computer processed using SPSS 20.0, and interpreted.

## Results

### Level of Organizational Politics of Selected Academic Personnel in the Tertiary level in the University

This section discusses the level of organizational politics or political behavior of academic personnel in the tertiary level of the University.

**Table 1:** Level of Organizational Politics of Selected Academic Personnel in the Tertiary Level in the University

Categories	Mean	SD	Interpretation
A. Entire Group	2.97	.85	Moderate
B. Personal Factors			
Age			
20-30 years old	3.14	.85	High
31-40 years old	2.76	.95	Moderate
41-50 years old	3.00	.84	High
51-60 years old	2.95	.87	Moderate
Above 60 years old	3.00	.84	High
Educational Attainment			
Baccalaureate Degree	2.95	.89	Moderate
Masterate Degree	2.97	.82	Moderate
Doctorate Degree	3.17	.98	High
Work Status			
Full time	2.96	.80	Moderate
Part time	3.00	.97	High

#### Length of Service in the University

Less than 5 years	2.92	.92	Moderate
6 – 10 years	2.95	.97	Moderate
11 - 20 years	3.06	.66	High
21 –30 years	3.06	.90	High
31 years and above	2.78	.83	Moderate

As shown in Table 1, as an entire group the rating was moderate ( $M= 2.97$ ,  $SD= 0.85$ ). When grouped according to age categories, the age groups of 31-40 years old ( $M=2.76$ ,  $SD= 0.95$ ) and 51-60 years old ( $M= 2.95$ ,  $SD= .87$ ) had moderate level of political behavior, while those belonging to the age groups of 20-30 years old ( $M=3.14$ ,  $SD= 0.85$ ), 41-40 years old ( $M=3.00$ ,  $SD= 0.84$ ), and above 60 years old had high levels of political behavior.

When classified according to educational attainment, college faculty members who are baccalaureate degree holders ( $M=2.95$ ,  $SD= 0.89$ ) and master's degree holders ( $M= 2.97$ ,  $SD= 0.82$ ) had moderate level of political behavior, and those with doctorate degrees ( $M= 3.17$ ,  $SD= .98$ ) had high level of political behavior. When the respondents were classified according to their work status, full time faculty members had moderate ( $M= 2.96$ ,  $SD= 0.80$ ) level of political behavior while the part time faculty members had high level ( $M= 3.0$ ,  $SD= .97$ ) of political behavior. Furthermore, when classified according to length of service in the university, those who have spent 11-20 years ( $M= 3.06$ ,  $SD= 0.66$ ), and 21-30 years ( $M= 3.06$ ,  $SD= 0.90$ ) in the university have high level of political behavior, while those with less than 5 years of service ( $M= 2.92$ ,  $SD= 0.92$ ), 6-10 years ( $M= 2.95$ ,  $SD= 0.97$ , and 31 years and above ( $M= 2.78$ ,  $SD= 0.83$ ) had moderate levels of political behavior.

#### Level of Psychological Empowerment of Selected Academic Personnel in the Tertiary Level in the University

**Table 2:** Level of Psychological Empowerment of Selected Academic Personnel in the Tertiary Level in the University

Categories	Mean	SD	Interpretation
A. Entire Group	3.22	.49	High
B. Personal Factors			
Age			
20-30 years old	3.05	.50	High
31-40 years old	3.31	.54	High
41-50 years old	3.14	.43	High
51-60 years old	3.29	.46	High
Above 60 years old	3.45	.52	High
Educational Attainment			
Baccalaureate Degree	3.15	.49	High
Masterate Degree	3.25	.50	High
Doctorate Degree	3.33	.52	High
Work Status			
Full time	3.18	.58	High

Part time Length of Service in the University	3.24	.46	High
Less than 5 years	3.22	.58	High
6 – 10 years	3.29	.56	High
11 - 20 years	3.15	.36	High
21 –30 years	3.35	.49	High
31 years and above	3.11	.33	High

The data in Table 2 are the results of the Psychological Empowerment test and showed that as an entire group, the academic personnel in the tertiary level, are highly (M= 3.22, SD= 0.49) empowered. When the respondents were classified according to age, all age group, 20-30 years old (M= 3.05, SD= 0.50), 31-40 years old (M= 3.31, SD= 0.54). 41-50 years old (M=3.14, SD= 0.43), 51-60 years old (M= 3.29, SD= 0.46), and those above 60 years old (M= 3.45, SD= 0.52) had high psychological empowerment level.

Likewise, when the respondents were grouped according to educational attainment, all had high level of psychological empowerment, baccalaureate degree (M= 3.15, SD= 0.49), masters degree (M= 3.25, SD 0.50), and doctorate degree (M= 3.33, SD= 0.52). When the group was classified according to work status, both the full time (M= 3.18, SD= 0.58) and part-time (M= 3.24, SD= 0.46) faculty members are highly empowered psychologically. Moreover, when they were grouped according to length of service to the university, all have high levels of psychological empowerment, less than 5 years (M= 3.22, SD= 0.58), 6-10 years (M= 3.29, SD= 0.56), 11-20 years (M= 3.15, SD= 0.36), 21-30 years of service (M= 3.35, SD= 0.49), and 31 years and above (M= 3.11, SD= 0.33).

### **Differences in the Level of Organizational Politics among Selected Academic Personnel in the University when Respondents were Grouped According to Age, Educational Attainment, Length of Service, and Work Status**

The t-test for independent samples revealed that there were no significant differences in the level of organizational politics when respondents were grouped according to work status,  $t(115) = 1.65$ ,  $p = .05$ . the data is shown in Table 3.

**Table 3:** t-test Results for the Differences in the Level of Organizational Politics among Selected Academic Personnel in the Tertiary Level in the University

Compared Groups	DF	Mean	SD	t - ratio	t – prob.
A. Work Status					
Full time	115	2.96	.80	1.65	.20
Part time		3.00	.97		

$p > .05$  Not Significant at .05 alpha

**Table 4:** One Way ANOVA Results for the Differences in the Level of Organizational Politics among Selected Academic Personnel in the Tertiary Level in the University when Classified According to Certain Categories

Sources of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F-ratio	F- prob.
A. Age					
Between Group	4	2.45	.613	.85	.49
Within Group	112	80.47	.718		
Total	116	82.92			
B. Educational Attainment					
Between Group	2	.25	.12	.17	.84
Within Group	114	82.68	.73		
Total	116	82.92			
C. Length of Service in the University					
Between Group	4	.84	.21	.29	.89
Within Group	112	82.09	.73		
Total	116	82.92			

p>.05 Not Significant at .05 alpha

Likewise, the results of the Analysis of Variance (ANOVA) as shown in Table 4 indicated that there were no significant differences in the level of organizational behavior of college faculty members when they were grouped according to age,  $F(4,112) = 0.85$ ,  $p = .05$ . When the respondents were grouped according to educational attainment, the data revealed no significant differences in the level of their political behavior,  $F(2,114) = 0.17$ ,  $p = .05$ . Likewise, no significant differences were revealed when the respondents were classified according to their length of service in the university,  $F(4,112) = 0.29$ ,  $p = .05$ .

Differences in the Level of Psychological Empowerment among Selected Academic Personnel in the University of San Agustin when Respondents were Grouped According to Age, Educational Attainment, Length of Service, and Work Status

The t-test for independent samples reflected in Table 5 revealed that there were no significant differences in the level of psychological empowerment when respondents were grouped according to work status,  $t(115) = 1.24$ ,  $p = .05$ .

**Table 5:** t-test Results for the Differences in the Level of Psychological Empowerment among Selected Academic Personnel in the Tertiary Level in the University of San Agustin

Compared Groups	DF	Mean	SD	t - ratio	t – prob.
A. Work Status					
Full time	115	3.24	.80	1.24	.27
Part time		3.18	.97		

p>.05 Not Significant at .05 alpha

The Analysis of Variance (ANOVA) indicated that there were no significant differences in the level of organizational behavior of college faculty members when they were grouped according to age,  $F(4,112) = 1.87, p .05$ . When the respondents were grouped according to educational attainment, the data revealed no significant differences in the level of their political behavior,  $F(2,114) = 0.64, p .05$ . Likewise, no significant differences were revealed when the respondents were classified according to their length of service in the university,  $F(4,112) = 0.66, p .05$ . The data is presented in Table 6.

**Table 6:** One Way ANOVA Results for the Differences in the Level of Psychological Empowerment among Selected Academic Personnel in the Tertiary Level in the University when Classified According to Certain Categories

Sources of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F-ratio	F- prob.
A. Age					
Between Group	4	1.76	.44	1.87	.12
Within Group	112	26.46	.24		
Total	116	28.22			
B. Educational Attainment					
Between Group	2	.31	.16	.64	.53
Within Group	114	27.91	.25		
Total	116	28.22			
C. Length of Service in the University					
Between Group	4	.65	.16	.66	.62
Within Group	112	27.57	.25		
Total	116	28.22			

$p > .05$  Not Significant at .05 alpha

### **Relationship Between Organizational Politics and Psychological Empowerment among selected Academic Personnel in the Tertiary Level in the University of San Agustin**

Results of the Pearson Product Moment Correlation Coefficient shows that there was a positive and significant relationship between organizational politics and psychological empowerment ( $r = .42, p .05$ ). The result means that the higher organizational politics, the more empowered the academic personnel will be.

**Table 7:** Relationship between Organizational Politics and Psychological Empowerment

Variables	Organizational Politics	Psychological Empowerment
Organizational Politics	1.00	.42*
Psychological Empowerment	.42	1.00

\* $p < .05$  Significant at .05 alpha.

## Conclusion

The results of the study showed a moderate level of political behavior among the selected academic personnel in the tertiary level of the University of San Agustin. Although when categories were considered, there are certain areas where high level of political behavior is manifested. For example, in the category of age, as the age group increase in years the higher the level of political behavior. In terms of length of service, the faculty members who are in the average years of 11-30 years in the university, experienced a higher level of organizational politics compared with those who are new in the university. It might be because they are trying to push themselves forward and to position themselves in the organization. The study further shows that the respondents have high level of psychological empowerment. This shows that even though the level of organizational politics ranges from moderate to high, the academic personnel are enhanced towards self-efficacy. They have the ability to succeed and are capable of controlling their destiny and they are not hindered by politics in the organization. A positive significant relationship exists between organizational politics and psychological empowerment which shows that there is a high level of political behavior in the organization, yet the people are also striving to cope with the situations and they take control of problems that may arise.

## Recommendations

The study has the potential value for organizational decision making as well as for further research. For organizational decision-making, there should be a regular staff development program to further enhance the capability of the employees. The study yield a moderate to high levels of organizational politics but the employees are highly empowered, so the administration should look into the possibility of involving these employees in decision making and in creating a well-balanced and healthy work environment. The study would also contribute knowledge about the present conditions of the university, especially in terms of its political climate. This study has also the potential for further researches, where other factors will be explored. Other stakeholders of the university should also be considered. It is also encouraged that further studies about these two factors, and its effect on the work performance and commitment to work of the various members of the University should also be considered. This should be given attention and importance in order to enhance the holistic development of the community.

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# **Assessment of Implementation of University of Rizal System Faculty's Extension Activities**

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## **Abstract**

In the core of every higher education institutions' aim is in strengthening two of their four-fold functions which are instruction and extension to enable them provide access to a free functional literacy and livelihood programs among indigent communities. It is along this premise that this study aimed to assess the implementation of University of Rizal System's literacy and livelihood extension activities in one of the communities in the eastern part of Rizal province. The study used descriptive-evaluative research design utilizing purposive sampling technique and the Focus Group Discussion (FGD) to further validate the responses of the beneficiaries in the livelihood activities and in the literacy program respectively. The result revealed that the respondents of the study evaluated the extension activities outstanding in all aspects with respect to planning and management, strategies which both obtained a mean of 4.42, faculty trainer's expertise with a mean of 4.45, and involvement of the participants obtained an average mean of 4.35. It was concluded therefore that the URS faculty's culture of conducting extension activities is well-implemented and it truly addressed and augmented the needs of the community.

**Keywords:** Focus Group Discussion, URS, Extension Activities, Beneficiaries

## **Introduction**

It has been said that time management is not about doing more but it is about doing what is right and necessary to accomplish one's goals and God's desire. Thus, this assessment of implementation for the extension activity is conceptualized, to enable the faculty proponents to create a meaningful life for themselves and for the others as well and this can be achieved by sharing the talents and riches that God have given them and it is only through sharing beyond the four corners of the room that they will truly feel a kind of fulfillment because they were able to fill-up other's emptiness.

As stated in Republic Act 8435, Chapter 2, Sec. 90, "The SUC's are mandated to primarily focus their extension services on the empowering of the capability of the LGU's in the delivery of extension services by providing degree and non-degree programs, technical assistance, extension and research activities, monitoring and evaluating the LGU extension projects and information support services".

Likewise in accordance to the pertinent provisions stated in Republic Act No. 7722 otherwise known as "Higher Education Act of 1994", higher education institutions (HEI's) are encouraged to become self-sustainable and are mandated to give priority to research and development and extension services and serve as the prime mover of the nation's socio-economic growth and sustainable development.

In addition, according to De Leon (2008), the educational system as mandated by the Constitution, shall reach out to educationally deprived communities in order to give meaningful reality to their membership in national society and finally enrich their civic participation in program undertaking.

These legal mandates clearly intensified that conducting extension services does not only respond to the university's mission and vision but more importantly it helps augment the needs of the community and other members in a social milieu. It is along these contentions, that led the faculty researchers to conduct a needs assessment survey among the target beneficiaries to enable them identify the extension services which are truly needed by the said community and the result yielded the community's immediate needs which are conducting free literacy and livelihood programs.

To intensify the objective of the study, the faculty researchers reviewed research studies in relation to the conduct of community extension services and one of these is a study conducted by Dilao (2011). She evaluated the impact of the community extension programs on the residents of Barangay Catadman-Manabay, and helped diagnose on the programs that need further improvements. A descriptive-evaluative method was used out of the sixteen respondents who believed that the extension program has enhanced their skills as recipients of LSU'S Community Extension Service.

The respondents of her study believed that LSU's extension programs have contributed a lot to the partner community on enhancing the skills and augmented the income of the residents. The respondents also perceived the necessity of improving the community extension programs of La Salle University especially the programs of SHM and College of Education. She recommended therefore that trainings must be planned, organized and systematically be implemented in order to have great impact to the clientele and to the community and a needs assessment survey must be done first in order to suit the interests of the clientele.

Moreover, according to Shonia (2012), in developing countries like Bangladesh, personal income of rural women is an essential precondition of enhancing their social income which led to the main purpose of her research which is on the improvement of their livelihood. She also looked into the women's livelihood situation, assess their income strategies through structured and semi-structured interview. The result revealed that majority of the women are involved in various activities for income earning though, their personal annual income does not suffice their needs, it showed that thirty-six percent of their income have increased and somehow augmented their daily needs.

In addition, Rama (2014), conducted an exploratory study with regard to Extension-research integration activities utilizing focus group interviews with extension and research faculty and her study revealed several themes, which included: current status of integration activities, perceptions of the roles of Extension and research, barriers to integration, and opportunities for integration. Time, funding, administration-related communication challenges, need for clarification regarding respective roles of collaborators, and lack of incentives and structural support were viewed as barriers. Utilizing faculty joint appointments, networking, involving graduate students in Extension and research activities, and serving on graduate student committees were strategies suggested. Based on the findings, a framework for integration is proposed.

It is with the aforementioned reasons that led the URS' faculty researchers to assess the implementation of their extension activities which was based from the needs assessment survey

they had conducted to the target community. It is hope that through the obtained results, they can implement better plans and opportunities among their beneficiaries and better serve their community through a suitable and sustainable livelihood extension activities that will help promote quality practices that will ensure a productive human life in Rizal province.

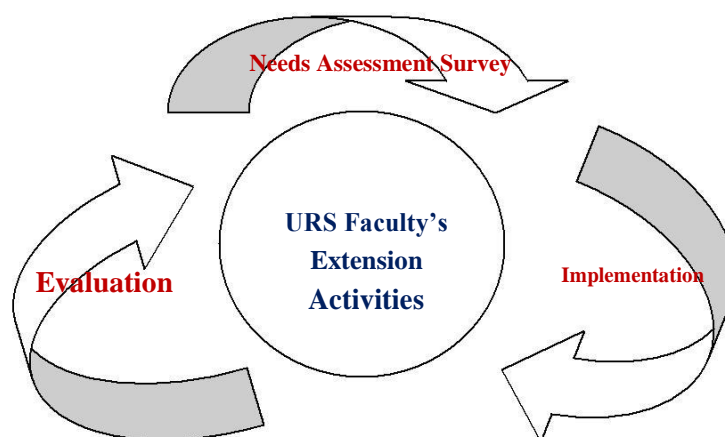
## Statement of the Problem

The study aimed to assess the implementation of URS' extension activities and it specifically sought answers to the following:

1. How do the respondents assess the implementation of URS' extension activities in terms of the following criteria:
  - 1.1 Planning and Management;
  - 1.2 Objectives;
  - 1.3 Topics/Lecture; and
  - 1.4 Venue?
2. How do the respondents evaluate the URS' extension activities with respect to:
  - 2.1 Strategies or Techniques;
  - 2.2 Faculty Trainers' Expertise; and
  - 2.3 Involvement of Participants?

## Conceptual Model and Theoretical Framework

The conceptual model of the study is illustrated by a circle and three arrows. The circle placed at the center is surrounded by three arrows signifying how the extension activities are being implemented while the three arrows represent the process done in carrying out the academic and social engagement to the community which are through the needs assessment survey, followed by implementation or the actual conduct of the extension activities and the last cycle is the evaluation phase. It is through this process that the faculty researchers gauged the conduct of their extension activities.



**Figure1:** The Conceptual Model Showing the Assessment of Implementation of URS Faculty's Extension Activities

Furthermore, the study is guided by two theories; the first theory is Muzafer's (1958) Super Ordinate Goal theory which explains that it is a goal that is of higher importance than

some other less important one. It is a goal that can be achieved only if individuals from various situations or conditions in life are brought together and worked together in harmony in order to become successful that also included their knowledge, energy and means. This theory is simply implying that shared goals can be achieved through cooperation among individuals or groups.

In addition, the second theory is Harbizon's (1973) Human Resources theory which assumes that human beings are the most important assets of the nation and of every organizations which is the same premise that the study is aimed for and that is to help the beneficiaries of the extension activities, to enhance their innate skills to become productive in their craft, become gainfully employed and help augment their families' basic needs and improve as well their status in life.

## Methodology

The study made use of descriptive-evaluative research design utilizing questionnaire - checklist to gather the needed data of the study and the Focus Group Discussion (FGD) to further validate the responses of the beneficiaries in the livelihood extension activities. According to Padua (2006), descriptive method is the best method of describing the status of events, people, or subjects as they exist. Furthermore, he said that this is useful in obtaining the prevailing status and conditions of the problems which are essential in understanding the present and future conditions.

The questionnaire-checklist was made by the researchers and it was validated by the experts in the field of research. It consisted of two parts; Part I dealt with items which assessed the implementation of the URS extension activities in terms of planning and management, objectives, topics/lectures and venue while Part II dealt with items on the evaluation of the URS extension activities with respect to strategies or techniques, faculty trainers' expertise and involvement of participants. The checklist made use of a 5-point scale; 5-Outstanding, 4-Very Satisfactory, 3-Satisfactory, 2-Poor, 1-Needs Improvement. The respondents of the study were the 36 or 73 percent of the 49 beneficiaries of the extension activities who were chosen randomly and in order to attain the objectives of the study, mean as the statistical tool was applied.

## Results and Discussion

**Table 1:** Assessment of the Respondents on the Implementation of URS' Extension Activities in Terms of the Different Criteria

Criteria	Mean	VI
A. Planning and Management		
1. An orientation is provided to the participants.	4.31	Outstanding
2. The extension activities are based from the needs of the community.	4.46	Outstanding
Over-all	4.39	Outstanding
B. Objectives		
1. Help increase the awareness of the participants.	4.56	Outstanding
2. Provided an opportunity to develop the participants' skill.	4.47	Outstanding
Over-all	4.52	Outstanding
C. Topics/Lecture		

Criteria	Mean	VI
1. Provide sufficient information.	4.40	Outstanding
2. Relevant to the enhancement of one's skill.	4.38	Outstanding
Over-all	4.39	Outstanding
D. Venue		
1. Is spacious and conducive for acquiring knowledge and skills.	4.44	Outstanding
2. Is convenient and accessible to the participants.	4.34	Outstanding
Over-all	4.39	Outstanding
General Mean	4.42	Outstanding

As reflected from the table, the general mean obtained on all the criteria is 4.42 and verbally interpreted as “outstanding”. It can also be gleaned that among the criteria, “Objectives” got the highest overall mean of 4.52 and also verbally interpreted as “Outstanding” while the criteria

“Planning and Management”, “Topics/Lecture” and “Venue” all obtained an overall mean of 4.39 and all are also verbally interpreted as “Outstanding”. Specifically, among the items for each criteria, items no. 1 and no. 2 of the “objectives” obtained the highest obtained mean of 4.56 and 4.47 respectively.

The result only implies that with respect to “objectives” these are found clear enough and understood by the respondents of the study since these are what was initially discussed prior to the implementation of the said extension activities. However, on the criterion “Planning and management” item no. 2, got the highest obtained mean of 4.46 which may imply that the respondents of the study were the same individuals who participated during the conduct of the needs assessment survey from where the faculty researchers based the conduct of their extension services.

Therefore, the table further reveals that the URS extension activities are planned, well-implemented and found indispensable and significant by the respondents. The said result is supported by the respondents during the focus group discussion. According to them, they are grateful to the university that it has extended for free the opportunity which enabled them hone their literacy and livelihood skills.

**Table 2:** Evaluation of the Respondents on the URS’ Extension Activities with respect to Strategies or Techniques

Strategies or Techniques	Mean	VI
A. Suitability of the language used.	4.43	Outstanding
B. Relevance and Importance of the topics.	4.43	Outstanding
C. Depth/Degree of the Lecture.	4.39	Outstanding
Overall	4.42	Outstanding

As depicted from the table, with respect to Strategy or Technique, the overall mean obtained is 4.42 and interpreted as “Outstanding”. Among the items, “Suitability of the language used” and “Relevance and importance of the topics” got the highest mean of 4.43 and interpreted as “Outstanding”. The least item is “Depth/Degree of the Lecture” with an obtained mean of 4.39 with a verbal interpretation of “Outstanding”.

The table further reveals that as evaluated by the respondents, the URS extension activities are exemplary as far as strategies or techniques are concerned. This therefore implies that the strategies and techniques used in the implementation of extension activities are appropriate and within the level of understanding of the beneficiaries.

This was confirmed by the respondents during the focus group discussion that through the “strategies”, “relevance and importance of the topics” and the “language used by the faculty experts”, they have easily understood the lectures imparted from the extension activities, from which they have also attributed their success in passing the National Competency Test conducted by TESDA and the Accreditation and Equivalency Test of the Department of Education respectively.

**Table 3:** Evaluation of the Respondents on the URS’ Extension Activities with respect to the Faculty Trainers’ Expertise

The Faculty Expert shows...	Mean	VI
A. Knowledge and Expertise on the Topics presented or discussed	4.48	Outstanding
B. Rapport with the participants	4.43	Outstanding
C. Strengthening the skills of the participants	4.43	Outstanding
Overall	4.45	Outstanding

As shown in the table 3, with respect to Faculty Trainers’ Expertise, the overall mean obtained is 4.45 and interpreted as “Outstanding” while specifically, the item “Knowledge and Expertise on the Topics presented or discussed” got the highest mean of 4.48 and verbally interpreted as “Outstanding”, followed by the items “Rapport with the participants” and “Strengthening the skills of the participants” both obtained a mean of 4.43 and interpreted as “Outstanding”.

The finding shows that the faculty trainers who are tapped to conduct the extension activities are expert in the discussion of the topics assigned to them and have demonstrated the appropriate skill which are emulated by their beneficiaries.

The said result is confirmed in an interview conducted to some beneficiaries of the extension activities that the topics and the skills imparted by the faculty experts led them to become gainfully employed and become engaged in their own small-scale businesses.

**Table 4:** Evaluation of the Respondents on the URS’ Extension Activities with respect to Involvement of Participants

	Mean	VI
A. Attendance of participants	4.35	Outstanding
B. Involvement of the participants	4.35	Outstanding
Overall	4.35	Outstanding

As shown in the table, with respect to involvement of participants, the overall mean obtained is 4.35 and verbally interpreted as “Outstanding” and the two items such as

“Attendance of participants” and “Involvement of the participants” both obtained a mean of 4.35 with a verbal description of “Outstanding”. The finding reveals that the beneficiaries have actively participated in the implementation of URS extension activities.

The result is supported by the beneficiaries of the program during the focus group discussion wherein they said that attending the extension activities became a part of their weekly routine and they are always excited to attend and to be involved in the said extension undertakings which according to them served also as their avenue to recharge from the stresses and pressures of the entire week.

**Table 5:** Composite Table on the Evaluation of the Respondents on the Implementation of URS Extension Activities

	Overall Mean	VI
Strategies or Techniques	4.42	Outstanding
Faculty Trainers' Expertise	4.45	Outstanding
Involvement of Participants	4.35	Outstanding

It can be gleaned from table that the overall mean obtained by Faculty Trainers' Expertise is 4.45 and verbally interpreted as “Outstanding”. On the other hand, with respect to Strategies or Techniques, it got an overall mean of 4.42 and interpreted as “Outstanding”.

Lastly, Involvement of Participants obtained an overall mean of 4.35 and verbally interpreted as “Outstanding”. The findings explain that the URS extension activities are well planned, managed and implemented as evaluated by the beneficiaries.

## Conclusion

Based on the findings of the study, it was concluded that the URS extension activities are well implemented and it truly addressed and augmented the needs of the community.

## Recommendations

On the basis of the findings made in this study, the following were the recommendations offered:

1. The conduct of extension activities should be sustained and strengthened by providing more engaging livelihood activities among its clientele; and
2. A sequel to this study may also be done using other variables or indicators which are not used in the study which will further intensify URS' social and academic engagements.

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# **Change Management Process Factors Affecting Attitudes of Cynicism: Assessing the Change Management Execution of a Philippine HEI**

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## **Abstract**

The focus of the paper is on the effectiveness of the implementation of change management programs of a Higher Education Institution in the Philippines for internal capability building and continuous improvements. The study tested the effects of change management execution on attitudes towards change, specifically the issue of organizational members' cynicism towards organizational change. The paper's framework is based on the constructs of organizational change namely content, context and process as perceived by the faculty members and their response in terms of belief or disbelief (cynicism) towards the change and on the leaders initiating the change (management).

The paper advances the effects of change management factors to cynicism supporting the premise that attitude towards change is dependent on the execution of change efforts. The objective of the study is to determine how management can effectively implement changes to promote and support organizational learning. The research explanatory design is supported by validated constructs and inferential statistics using linear regression tools.

The study provided evidence that employees cynicism are results of experiences of past change execution efforts. It was shown that change specific and management cynicism are significantly affected by employees' observation of the content, context, and process factors. However, content and process factors have greater contributions in predicting attitudes of cynicism indicating that if the employees do not have a clear understanding of the purpose, necessity and effects of the changes and are not given opportunities to participate in the change process, they will be cynical to change itself and the management implementing the change.

**Keywords:** Change Management, Content, Context, Process, Cynicism

## **Introduction**

Organizational change is inevitable in a dynamic and competitive business environment. This fact makes it imperative for organizations to continuously adapt new systems, processes and structures to remain competitive and relevant. Change affects everyone in the organization so it is essential to effectively manage and implement change. Critical factors such as employees' reactions to the change must also be taken into consideration to ensure positive responses to change. Employees as the most important asset of the organization are the key to a successful organizational change (Paton and McCalman, 2000). How people would respond to any change effort could determine the fate of the organization.

According to Vithessonthi (2005), successful change efforts lead to positive attitudes toward change thus leading to employees' acceptance and openness to change. Positive

attitudes toward change reduce the likelihood of having higher levels of passive resistance to change. "Management can therefore reduce the negative consequences of organizational change by promoting employees' positive attitudes towards organizational change." However, failure of the management to foster positive perceptions and attitudes toward change will lead to resistance and cynicism to change. (Vithessonthi, 2005).

Organizational change is considered one of the main causes of organizational cynicism (Nafei, 2013). Organizational cynicism has many unintended consequences. Negative consequences of organizational cynicism include reduce job satisfaction, lower organizational commitment, lower work motivation and high turnover intentions (Chiaburu, et al, 2013; Reichers, Wanous, and Austin, 1997). Organizational cynicism, if not addressed properly can impede the success of any change effort and in the long-run be detrimental to the organization's performance. Therefore, the management must pay attention to organizational cynicism and investigate the reasons why members behave this way most importantly during times of needed change.

## **Research Context**

The study involved the effects of change management execution of a Philippine Higher Education Institution. Education institutions like any other organizations respond to the demands of a dynamic environment through incremental changes within the organization. Change leaders need to see the whole organization through the process of change from initiation, execution to success. Since the premise of the paper is the resulting attitude of the members towards organizational change, the management must examine how well change had been managed in the past and determine whether these contributed to attitudes of cynicism or openness to change. De La Salle Lipa has been initiating changes to continuously improve its educational services for about three years, since the installation of a new set of administrators. The new administrators implemented some changes in institutional directions which they believed as necessary, as the institution set its goal to produce graduates for a more demanding and complex business environment. The institution believes that to make students learn to adapt to changes, the school also needs to change their perspective in how to improve their performance through learning. Learning by knowing how they have been doing with their change efforts and how the rest of the members of the organization are taking the changes in the organization. To address this concern, the present study determined the effects of change management execution on attitudes of cynicism towards change. The used of process, content and context variables of an organizational change was explored, as to how these variables were managed during those periods of organizational change. Likewise, the response of the members of the organization in terms of their attitude towards these changes was also determined.

## **Literature Review**

### **Management of Change**

Management of change and the processes involve in effecting change are critical in the implementation of any change effort. According to Quick and Nelson (2009) there are three factors which are essential in managing change: employee participation or involvement, communication and supervisory support. Two of these change process variables - communication and employee participation and involvement were also emphasized by Paton and Mc Calman, 2000; Kreitner and Kinicki, 2008, as essential factors in implementing change. Several studies look into the role of these change process variables. In the study of Vakola and Nikolau (2005) they recommended supportive working relationships and effective

communication in developing positive attitudes to change. This is the same with the study of Rodda in 2010, which revealed that participation and supervisory support were related to commitment to change and job satisfaction. These factors are change process variables which were proven to be significant in an organizational change.

The challenge for an organization during needed changes is the cooperation and support of its members. However, cooperation and support could be influenced by the members' appalling experiences with organizational agents' poorly executed change efforts in the past. It is on this premise that the framework is developed for this study. The paper assumes that the success or failure of change efforts leads to positive/negative attitudes toward change thus leading to employees' acceptance of changes or disbelief in the motives for a change or cynicism. The paper has for its assumption that it is how change efforts were executed that leads to attitudes of cynicism. To test this assumption, the paper proposed that content, process, and internal contextual factors relevant to organizational change efforts are factors that could affect the way that employee beliefs, attitudes and intentions will be affected either positively and or negatively. These attitudes in turn result in changes in behavior favorable or unfavorable for the change efforts and organizational performance (Self, D. R., Armenakis, A. A. and Schraeder, M., 2007).

**Content.** Organizational communication regarding change is critical to create how members of the organization see what will result from the changes and should be taken positively with confidence in the process of change (Smith, I, 2005). Change message contents are expressed in terms of the impact of the change especially on those who will be affected by the change (Self, D. R., et. al., 2007). These (change message contents) are supposedly specific to each organization, must be simple, relevant, meaningful (for all types of organizational members) and consistent (Walker, H. J., Armenakis, A. A. and Bernerth, J. B., 2007; Barrett, D. J. 2002). Change message contents should have vision clarity to encourage positive affective outcomes (Cole, M. S., Harris, S. G. and Bernerth J. 2007). Change initiative's fit (appropriateness) with the organization is also important (Self, D. R., and Schraeder, M., 2009) and should be viewed by employees as the correct approach to pursuing the vision (Cole, et.al. 2007). Change message should also be clear on the conditions that could threaten job security (Devos, G., Buelens, M. and Bouckenoghe, D., 2007) that members can comprehend the value of change for them. These values are perceived in terms of extrinsic valence or the extent to which participants expected the change to enhance or damage career outcomes or interpersonal valence or the extent to which participants expected the change to enhance or damage social interactions after implementation (Holt, D., Self, D., Thal, A. Jr. and Lo, S., 2003).

**Context.** The environment for change is critical for the success of the change efforts. Contextual factors are the circumstances or conditions that have been shown to influence organizational effectiveness especially during change. It also refers to organizational conditions and practices assessed through some self-report methodology, to describe the context within which an organizational change is implemented (Self, et.al. 2007). It is where and how the organizational members' interpretations of the changes are made during the process of change and may express the employee's perception of the organization's attitude towards them. Contextual factors include how the management supports the change efforts in terms of their involvement, responsibility for communicating the change message and exhibiting the behavior they expect from their employees (Devos, et.al. 2007; Self, et.al. 2007; Holt, et.al. 2003; Barrett, D., 2002).

Process. Leaders as change agents must not only provide members of the organization with information about the changes and justify the appropriateness but also make them participate in the process. Change execution reflects the actual process of introduction and unfolding of the changes within the organization (Cole, et.al 2007). It is a way to help the members of the organization to clearly see their role to build confidence and eventually commit to the changes (Smith, I. 2005). This is critical to get support from the members of the organization since employee involvement not only enhances two-way communication within the organization, but sends an implicit message to employees that they are valued and that the organization trusts them enough to be included in the decision-making process (Self and Schraeder, 2009). Participating during the process of change gives organizational members the opportunity to have an impact on the change and build capability to cope with change (Devos, et.al. 2007).

Cynicism. Chiaburu, et al (2013) conceptualized cynicism as a construct which represents an employee's negative attitude toward their organization as a whole and belief that the organization lacks integrity. Defining cynicism on its cognitive component, Stanley, et.al., (2005) defined cynicism as “disbelief of another’s stated or implied motives for a decision or action applied broadly (e.g., to people in general) or narrowly (e.g., to a particular person in a specific situation) and, therefore, can guide and measure development regardless of context’.

Dean, Brandes, & Dharwadkar (1998) defined organizational cynicism as an attitude towards one’s employing organization. Furthermore, they conceptualized organizational cynicism as a multi dimensional construct compose of beliefs, affect, and behavioral tendencies. Andersson (1996), on the other hand, defined organizational cynicism as general or specific attitudes of disappointment, insecurity, hopelessness, anger, mistrust of institutions or persons, group, ideology and social skills. Cynicism in general is associated with negative attitudes towards the organization and the changes in the organization.

Change Execution (Content, Context and Process) and Cynicism. There are several literatures which investigated organizational cynicism as an outcome of an organizational change. Reichers, Wanous, and

Austin (1997) viewed cynicism as an outcome of an organization’s past change attempts which were not entirely successful resulting to the loss of faith in the leaders of change. It is also a result of an individual’s predisposition to have a cynical perspective about things and therefore even to change.

Moreover, those employees who were not able to participate in the decision making and felt that they were not fully informed because of lack of communication exhibited cynicism to change. However, Reichers et. al. (1997) claimed that cynicism need not necessarily lead to resistance to change. Nevertheless, results of their study revealed that cynicism leads to lower commitment, satisfaction, and motivation to work hard which shows that cynicism is indeed detrimental to an organization’s performance and hence needs considerable management’s attention.

The same arguments were shared by Brown and Cregan (2008) who viewed cynicism based on two elements; a view that change is futile and placement of blame for the failure of change programs on the facilitators of change, which are outcomes of the employees’ experiences. Likewise, their study revealed that information sharing and employees’ involvement in decision making lead to better understanding of management decisions and

consequently lower levels of organizational cynicism. Qian Yuxia (2007), on the one hand found out that perceived quality of information, cynicism of colleagues and trust in the administration have effects on change-specific cynicism, which in turn, leads to intention to resist change. Furthermore, his findings revealed that distrust in the administration and lack of influence over the change results could be the sources of the faculty members' cynicism and resistance to change. Albrecht (2002) conducted a similar study identifying three key trust-related antecedents of cynicism toward change: perceptions of integrity, competence, and trust in senior management. His findings revealed that perceptions of integrity and trust in senior management influence cynicism toward change. However, employee perceptions of the competence of senior management did not have a direct influence on trust nor on cynicism toward change. This contradicts the previous literatures above where cynicism is viewed as an outcome of the management's ineffectiveness in instituting change.

Stanley, et. al. (2005) also examined cynicism and its relation to employees' reaction to organizational change. Cynicism in this study was defined as disbelief in the motives of others and cynicism about the people (e.g. management) and about a specific context (e.g. organizational change). Moreover, cynicism about change is also believed to be a reaction to experiences within the organization. His findings revealed that high correlation exist between management cynicism and trust in management and as well as between change-specific cynicism and intention to resist change. I.L. Ribbers (2009), also identified the direct factors which reduce organizational cynicism in the context of an organizational change. Organizational cynicism can be reduced with higher levels of organization-based self-esteem which can be obtained if employees perceive fairness about organizational outcomes and of the interpersonal treatment received in the decision process. Furthermore, he emphasized the importance of the management's role in creating trust or cynicism among employees in an organizational change. Trust can be develop and cynicism can be reduced through the management's open attitude toward the employees, provision of accurate information, and explanations for decisions.

Another literature which examined the relationship between organizational cynicism and organizational change is the study of Nafei in 2013 claiming that one of the main causes of organizational cynicism is organizational change. He recommended that managers should deepen employees' perception of organizational justice to reduce organizational cynicism. Lastly, Bartona and Ambrosinib (2013), explored organizational cynicism as a barrier to effective implementation of strategic change initiatives. Their findings revealed that organizational cynicism moderates the positive effect of senior management support for the organizations' strategy on middle managers' strategy commitment. This implies that those middle managers who had past experiences of failed change initiatives will not be as committed to any strategic change if it is initiated by senior management. This is in line with the finding of Reichers et al. (1997) that middle managers blame those responsible for making the change, the senior managers. Moreover, positive relationships were found between low levels of organizational cynicism and information availability and strategy commitment. Likewise, participation of middle managers in the change effort can help facilitate the acceptance of change and reduce organizational cynicism.

## **Framework of the Study**

The preceding discussions provide evidence that organizational cynicism is an outcome of an organizational change. However, the paper has for its assumption that it is not the change that predicts attitudes of cynicism but rather how change efforts were

executed that leads to attitudes of cynicism (Figure 1). To test this assumption, the paper proposes that content, process, and contextual factors relevant to organizational change efforts are factors that could affect the way that employee beliefs, attitudes and intentions will be affected either positively and or negatively to with;

*Ho<sub>1</sub> Change execution factors (content, context and process) affect attitudes towards change - change specific cynicism and management specific cynicism.*

*Ho<sub>2</sub> Change execution factors (content, context and process) are predictors of attitudes towards change - change specific cynicism and management specific cynicism.*

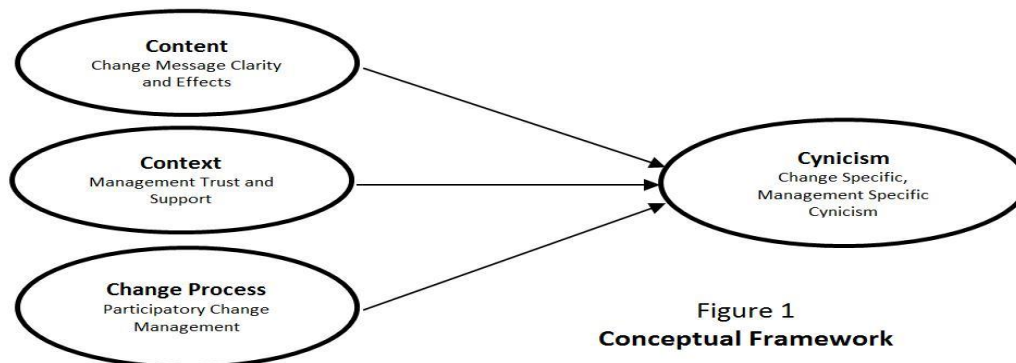


Figure 1  
Conceptual Framework

**Figure 1: Conceptual Framework**

## Methodology

De La Salle Lipa, a Higher Education Institution in the Philippines and its full time faculty members were the subjects of the study. Total enumeration was sought however only 89 faculty members from the five colleges (College of Business, Economics, Accountancy and Management, College of Nursing, College of Education, Arts and Sciences, College of Information Technology and Engineering and College of International Hospitality, Tourism and Management) returned the survey questionnaire. The study had for its predictor variables the change execution factors: content, context and process. The perception of the faculty members as respondents was sought to express their observations on how incremental changes were executed for the last three years of operation. Respondents were asked to express their perceptions by choosing from an 11 point likert-type scale which ranges from strongly disagree to strongly agree. For the instrument, the study made use of the works of Armenakis, et.al (2007), "Organizational Change Recipients' Beliefs Scale: Development of an Assessment Instrument." Their work validated an instrument to determine the beliefs one has over the changes in their organization. The instrument was modified in the study to fit the retrospective purview of the responses and 5 items was selected for each factor as guided by literature review.

For the criterion variable, attitudes towards organizational change were identified in terms of change specific cynicism or disbelief in one or more individuals within a specific context which in this paper is/are the organizational changes implemented for the last three years. On the one hand, management specific cynicism applies to cynicism about certain types of people which in this paper is the management. The constructs were from the work of Stanley, D., Meyer, J. and Topolnytsky, L. (2005), "Employee Cynicism and Resistance to Organizational Change." Procedure for data gathering is self-administered survey. To test the hypothesis for assuming effect, regression analysis was used. Significant benefit of the paper for the institution is the assessment result of its change management execution and the response

of its faculty members towards change. Results of this study could help the institution realize its organizational strengths as well as weaknesses as a learning organization.

## Results

The study initially used five items for each change management factor. After doing factor analysis, 3 items were left for all change management factors. The process was done to summarize data by regrouping items into a limited set of clusters based on shared variance to isolate change management factors from one another (Yong & Pearce, 2013). Items are dropped when they poorly measure the factor (low factor loadings) or when they measure more than 1 factor (cross loading) and interpretation is difficult (how it fits the factor it measures). However, cross loading can be retained with the assumption that it is the latent nature of the variable (Yong & Pearce, 2013). At least three survey questionnaire items for every factor can be retained in a model (DeCoster, 1998, online). All variables are from a normally distributed data with SW significant levels all above .05

### Respondents' Observations on the Change Execution Factors

Change execution reflects the actual process of change implementation (Cole, et.al, 2007) which can help the members of the organization to clearly understand their role, build confidence and commit to change (Smith, I.2005). The objectives of the study are to determine the faculty members' observation of the change execution factors and determine how the implementation of past changes in the institution affected faculty members' attitude towards the change and the management who initiated and executed the change. Based on the faculty members' observation, it is notable that the process factor has the lowest overall mean among the change execution factors. The process factor has a mean of 5.99 which is close to having a moderate disagreement. This indicates that faculty members believed that they were not given much chance to participate in the change process (over all mean=5.99, SD=1.55). Specifically, on identifying the scope and nature of the changes (mean=5.89, SD= 1.81), understanding their role in the implementation of the said changes (mean=5.99,SD= 1.63) and helping them cope with the changes by learning and developing competencies (mean=6.08, SD=1.54). Participation during the process of change is essential for it gives organizational members the opportunity to have an impact on the change and build capability to cope with change (Devos, et.al. 2007). Moreover, employee involvement enhances two-way communication within the organization, sends an implicit message to employees that they are valued and that the organization trusts them enough to be included in the decision-making process (Self and Schraeder, 2009).

On the one hand, faculty members have a moderate agreement as to the content of the change (overall mean = 6.21, SD=1.31) indicating that they did not fully understand the purpose or reason for implementing those changes (mean=6.01, SD= 1.49) and as well as on the effects of the changes in the improvement of the organization's performance (mean=6.26, SD=1.38). According to Cole, et. al., (2007), change message contents should have vision clarity to encourage positive affective outcomes. Change message should also be clear (Devos, et. al., 2007) that members can comprehend the value of change. A clear understanding of the value and purpose of the change can lead to positive attitudes toward the change.

Faculty members, likewise, agreed moderately in terms of contextual factors (mean=6.57, SD= 1.38) which pertain to management trust and support. This implies that faculty members do not fully trust the management leading the change. According to Vakola

and Nikolau (2005), supportive working relationships and effective communication can help develop positive attitudes to change. In addition, participation and supervisory support were also found to be related to commitment to change (Rodda, 2010).

#### Faculty Members' Attitude Toward Change Specific and Management Specific Factors

In terms of the faculty members attitude towards the change, they moderately agreed towards change specific factors (mean=6.16, SD = 1.34). In particular, on their belief that the programs implemented to solve the problems produced much real change and did a lot of good for the organization (mean= 5.99, SD = 1.42 and mean = 5.95, SD=1.41 respectively). Faculty members are likewise in moderate agreement as to management specific cynicism (mean=6.18, SD=1.43). Specifically, on those statements referring to their doubts regarding the management (mean=6.14, SD =1.62), their motives in decision making (mean = 6.14, SD=1.56), and objectives (mean=6.22, SD=1.63). However, it can be noted that the responses are quite low and are almost close to having moderate disagreement which suggest that faculty members have an inclination to be cynical to change and the management as well. According to Nafei (2013), organizational change is one of the main causes of organizational cynicism. As stated in Broner's (2003) findings, employees will exhibit less cynicism if they can make sense out of the proposed changes and see the need for them. Likewise, employees' faith in change agents abilities and knowledge reduces cynicism. However, employees will exhibit negative attitudes when they are uninformed, are not involved in the decision making process and they do not see beneficial outcomes of the proposed changes.

#### Effects of Change Management Execution Factors on Change Cynicism

The results supported the study's hypothesis that change execution factors are predictors of change cynicism (Ho2). Regression results showed that all the change execution factors; content, context and process factors are predictors of change cynicism with p-values which are less than .05 (0.001, 0.012 and 0.006 respectively). Analysis also revealed that change execution factors affect attitudes of cynicism to change with the content factor exhibiting the greatest contribution in terms of its effects on change cynicism (beta =0.35) . This is followed by process (beta=0.28) and context (beta=0.26) factors which supported Ho2. These indicate that clarity of the change message content, management trust and support and employees' participation in the change process significantly affect employee's attitude of cynicism to change. Several studies have proven that it is essential for employees to have a clear understanding of the purpose, necessity and effects of the change, otherwise lack of which will lead to negative attitudes toward change. Stanley (1998) proved in his findings that change-specific cynicism is negatively related with perceptions of management competence, perceptions of problem importance, and perceived understanding of the reasons for change. Moreover, the relation found between change-specific cynicism and perceptions of management competence may have been the result of beliefs about management's motives which in turn influence perceptions of management's competence. The studies of Reichers, et. al. (1997) and Brown and Cregan (2008), showed that information sharing and employees' involvement or participation in decision making are essential in achieving better understanding of management decisions. Lack of employee participation and communication, however, leads to cynicism to change. I.L. Ribbers (2009), likewise, pointed out that trust can be develop and cynicism can be reduced through the management's open attitude toward the employees, provision of accurate information, and explanations for decisions. In the same manner, trust to the change implementers and support given by the management to employees significantly affect attitudes of cynicism to change. YuxiaQian (2007) identified perceived quality of

information, cynicism of colleagues and trust in the administration to have effects on change-specific cynicism. In particular, distrust in the administration and lack of influence over the change results were determined as possible sources of cynicism and resistance to change.

### Effects of Change Management Execution Factors on Management Cynicism

Based on the results only two factors, content and process are predictors of management cynicism having p values which are less than 0.05 (with p values of 0.000 and 0.000 respectively). This partially supports the hypothesis of the study that change execution factors affect and are predictors of management cynicism. Content factor, however, exhibited greater contribution in predicting attitudes of cynicism towards the management ( $\beta=0.37$ ) than process factor ( $\beta=0.32$ ). Similar to change cynicism, clarity of the change message content with regard to its purpose, necessity and effects along with employees' participation in the change process significantly affect employees' attitude of cynicism towards the management implementing the change. This substantiates the findings of Ribber. I.L.(2009) that management and supervisors have an essential role in creating trust or cynicism in organizational changes. Furthermore, he also emphasized the need for supervisors to communicate to employees with an open attitude and to provide accurate information and explanations for decisions during an organizational change. According to Ribbers, I.L. (2009) these result to higher levels of trust and lower levels of cynicism in organizations. Consistent with the study of Stanley (2005), which showed that management cynicism is highly correlated with trust in management which suggests that high levels of trust in the management leads to lower levels of management cynicism.

## Conclusion

The study provided evidence that employees cynicism towards change and the management are results of experiences of past change execution efforts. Specifically, it was shown that change specific cynicism and management cynicism are significantly affected by employees' observation of the content (change message clarity and effects), context (management trust and support), and process (participatory change management) factors of past organizational changes. However, it can be noted that the content and process factors have greater contributions in predicting attitudes of cynicism. This indicates that if the employees do not have a clear understanding of the purpose, necessity and effects of the changes and they are not given opportunities to participate in the change process, they will be cynical to change itself and the management implementing the change. Nevertheless, the context factor which pertains to management trust and support is also essential for the management plays a significant role in communicating and providing accurate information of the change message content and as well as providing the opportunities for employees to be involve in the process. These elements as discussed in several literatures are in turn necessary to develop trust and positive beliefs on the managements' intentions and motives in the implementation of any change initiative.

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# Determining Involvement Factors of School Employees in its Volunteering Programs

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## Abstract

This exploratory research analyzed the employees of De La Salle – College of Saint Benilde in determining their involvement factors in volunteering programs given by Center for Social Action (CSA), specifically why employees fail to participate in its volunteering activities. The study adapted the Theory of Reasoned Action by Ajzen and Fishbein (1967) as framework, and utilized a self-made survey to probe the employees. The results were analyzed using thematic analysis and logistic regression. It is found out that the employees work schedule, the weak management support, the current volunteering program, the proximity of venue as well as their personal concerns are found to be contributors why majority of the employees fail to engage in volunteering activities despite their expressed need and high level of awareness on volunteering opportunities offered by CSA. Moreover, the likelihood of willingness to engage in volunteering activities decreases as one predictor increases, holding all other factors constant. These findings expressed that CSA needs to further improve their adult volunteering program.

**Keywords:** Employee, Volunteerism, Altruism, Engagement, Motivation, Involvement, Adult Formation, Community Service, Prosocial Behavior

## Introduction

In the Philippines, volunteerism, has long been deeply rooted in its culture and traditions, and was locally defined in different encompassing terms like *Bayanihan*, *Damayan*, *Kawanggawa*, *Pakikiisa*, and *Bahaginan*, (Llenares & Deocaris, 2015). As these diverse local terms outlined the extraordinary Filipino volunteerism, it is also a challenge for everyone, including schools, colleges and universities to respond to the greatness of the Filipino volunteering spirit. It has been argued through time the positive and negative effects of workplace volunteering on both the employees and the institution. According to the study written by Geroy, Wright and Jacoby (2000), historically, it is believed that active participation in non-work activities steals from the workplace of time and commitment (Kanter, 1997); despite that, there are plenty that had been written that distinguishes the active participation to non-work activities such as amplifying employee morale and productivity (Caudron, 1994; Davidson, 1994; Finney, 1997; Flynn, 1994; Listad, 1995; Miller, 1997; Smith, 1994) and can “support, facilitate, or enhance work life” (Crouter, 1984, p. 430).

Based on the 2014 study conducted in the College, the Lasallian Partners Formation Needs Assessment, it was concluded that 93% of the employees expressed the need to participate in programs that would allow them to engage in projects and educational services for the poor, and share their resources to those in need. However, considering only those who

responded, there are only 44% of the total employee respondents volunteered in Center for Social Action. This result is comparable to the prior statistics.

Hence, this study was conducted to identify the specific factors why majority of the employees fail to engage in volunteering activities despite their expressed need. Specifically, the research aims to investigate on the following: (a) the socio-demographic characteristics of the employees, (b) the past volunteering experiences of the employees, (c) the factors why employees volunteer using the question from Volunteering Australia, (d) the level of awareness and participation of employees on the volunteering opportunities given by CSA, (e) what factors encourages and discourages the employees to engage in volunteering opportunities, and lastly, (f) to create a model that will predict the likelihood of employees' willingness to volunteer.

Considering the diverse factors on workplace volunteering, employees who volunteer are assumed to be motivated to help despite the lack of tangible benefits (White, 2008). The works of Widjaja (2010), stated that volunteering includes functional motives, role identity, dispositional factors, situational circumstances, and organizational components (Finkelstein, 2009; Mowen and Sujan, 2005; Penner, 2002). Also, Widjaja (2010) stated that according to Penner (2002), the organization's reputation, employee culture, and dispositional factors, such as personality traits, belief, and values, also influences an individual's decision to volunteer.

Specifically, the researchers investigated the beliefs which sums as factors that make employees volunteer using the Theory of Reasoned Action by Ajzen and Fishbein (1967). This theory captures the necessary conceptual elements to explain and predict moral behavior (Vallerand et al., 1992). Further, this theory states that the presence, behavior, and opinions of others (Bandura, 1986; Froming, Walker, and Lopyan, 1982; Latané and Darley, 1970; Milgram, 1963; Schwartz and Gottlieb, 1980), as well as the immediate context within which behavior is to be emitted (Backman, 1985; Barnett and Bryan, 1974; Kurtines, 1986; Orlick, 1981) have an important impact on moral behavior (Vallerand et al., 1992). These theories were adapted as theoretical framework of the study because it asks about the person's attitudinal, normative and control beliefs which allowed the researchers to understand under which beliefs and motives do employees operates in evaluating whether or not they will engage in volunteering opportunities offered by CSA. To better understand overall theoretical concept which guided the conduct of the study, refer to the theoretical framework shown below in Figure 1.

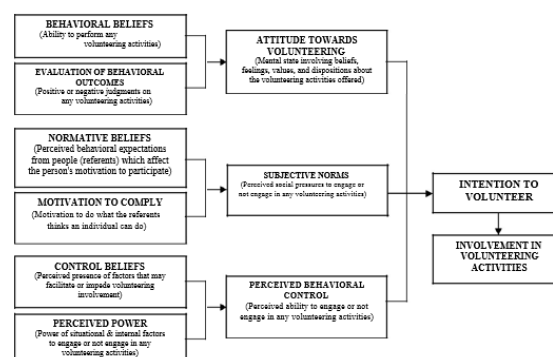


Figure 1. Theoretical Framework of the Study

## Methodology

This exploratory research devised the Cochran's formula to obtain 265 employees who are currently working in De La Salle-College of Saint Benilde to determine their involvement factors in volunteering programs given by Center for Social Action (CSA), and was drawn using simple random sampling.

The questionnaire was designed to include variables identified in previous studies to play significant role in determining involvement factors in volunteering programs. The proponents utilized the online quantitative and qualitative survey because of its speedy distribution and response cycles, and ability to transfer survey responses directly into a database by eliminating transcription errors and alteration (Lonsdale, Hodge & Rose, 2006). Aside from the self-made quantitative questions which helped the proponents understand the volunteering involvement of the employees in CSA, the proponents also used one survey question adapted from Volunteering Australia that asked about what the participants value most in volunteering experiences as part of the quantitative questions. On the other hand, the qualitative data was also gathered through an online interview to increase their anonymity, and to get an honest and uninhibited answer. Pretest was administered on both quantitative and qualitative questions to purposively chosen sample of respondents. This aimed to identify confusing or ambiguous questions. Necessary revisions were made on the questionnaire based on the result of the pretest done.

Thematic Analysis was used to analyze the qualitative data, where proponents coded and recorded patterns across the data sets. On the other hand, descriptive and binary logistic regression analyses were used for the quantitative data. The latter is used to model binary variables and categorical predictors and its dependent variable denotes the probability of success. In the context of the study, this represents the probability of willingness of an employee to engage in volunteering activities in the future. After coming up with a model, Wald's test was utilized to test each  $\beta$  variable to find out if it contributes to the significance of the model. All the tests were run using IBM SPSS Statistics 22.0.

## Results

The result of the study shows the socio-demographics of the employee respondents, and revealed their mean age which is 37 years old. It is also found out that there are 60.37% female and 39.63% male, and that 58.52% are single and 41.48% are already married. In addition, 45.93% attained a bachelor's degree, 24.44% are still working on their masters, 18.89% completed their master's degree, 8.89% are working on their doctorate programs and only 1.85% completed their doctorate degrees. Data also showed that 34.44% of the employee respondents are working as support staff of the College, 26.67% are full time faculty, 20.74% are administrative staff, 17.78% are academic service faculty, and 0.37% administrative service personnel, with at least 7 years of service in the College. Table 1 shows the data.

**Table 1:** Socio-Demographic Characteristics of Employee Respondents

Socio-Demographic Characteristics	<i>f</i>	%
<b>Educational Attainment</b>		
Bachelors	124	45.93
with Masters Unit	66	24.44
Master's Degree	51	18.89
with Doctorate Unit	24	8.89
Doctorate Degree	5	1.85

<b>Employment Category</b>		
Support Staff (SS)	93	34.44
Administrative Staff (AS)	56	20.74
Administrative Service Personnel (ASP)	1	0.37
Academic Service Faculty (ASF)	48	17.78
Full Time Faculty (FTF)	72	26.67

The employee respondents were asked about their past volunteering experiences, and it is found out that 85.9% of the employees who stated that they have engaged in volunteering activities in the past and only 14.1% who admitted that they have not participated in any volunteering work. Specifically, 63.33% have volunteered in school, 44.81% have volunteered in non-government organizations, 42.59% in their church or parishes, 33.33% in their local community and 6.29% in government organizations. Table 2 shows the data.

**Table 2:** Past Volunteering Experiences of Employee Respondents

<b>Past Volunteering Experiences</b>	<b><i>f</i></b>	<b>%</b>
School	171	63.33
Church / Parish	115	42.59
Local Community	92	33.33
Non-Government Organizations	121	44.81
Government Organizations	17	6.29

The proponents also asked the reasons why employees volunteer, and it is found out that 41.48% stated that volunteerism gives them a sense of purpose, 38.89% said that it allows them to make a difference in the community, 34.81% said that it allows them to experience new things, and there are 27.78% who said that it gives them opportunities to use the skills they already have. 21.48% said that volunteering gives them opportunities to increase their social connection, 21.11% for their professional development, 17.04% looks forward from the support provided to volunteers and 6.3% stated that volunteering gives structure in their day. These affirms the works of Caudron (1994), which states that volunteering provides them opportunities to employees to increase their social connections, and it is an economical response to employee training needs (Caudron, 1994; Lidstat, 1995; Kirchmeyer, 1992; Finney, 1997; Romano, 1994), and that it provides personality enrichment and development of skills and perspectives, as well as self-esteem, and ability to be proactive problem solvers on the job (Geroy, Wright, and Jacoby, 2000). Table 3 shows the data.

**Table 3:** Factors Why Employee Volunteers

<b>Involvement Factors</b>	<b><i>f</i></b>	<b>%</b>
Experience new things	94	34.81
Sense of purpose it gives you	112	41.48
Structure it gives my day	17	6.3
Using the skills I already have	75	27.78
Developing new skills	56	20.74
Professional development	57	21.11
Difference I make to the community	105	38.89
Support provided to volunteers	46	17.04
Social Connection	58	21.48

The respondents were also asked about their awareness and participation on volunteering activities in the College. It was found out that 85.9% of the employees admitted that they are aware and only 14.17% who are not. Specifically, 65.56% of the employees are aware of Summer of Service, but only 8.89% of them have participated. For community service program, 44.81% are aware but only 5.93% have volunteered. For relief drives, 62.22% are

aware and 18.15% have participated. For the alternative learning system, 58.15% are aware and only 8.89% have volunteered. For voter's education session, 57.41% are aware and 11.48% have participated. For immersions, 35.19% are aware and only 8.52% have participated. For outreach activities, 26.3% are aware and only 8.52% have volunteered. Lastly for mass mobilization, 22.96% are aware and only 7.04% have participated in CSA. Table 4 shows the data.

**Table 4:** Volunteering Opportunities given by CSA to employees

Volunteering Opportunities	Awareness		Participation	
	<i>f</i>	%	<i>f</i>	%
Summer of Service	177	65.56	24	8.89
Community Service	121	44.81	16	5.93
Alternative Learning System	157	58.15	24	8.89
Relief Drives	168	62.22	49	18.15
Voter's Education Session	155	57.41	31	11.48
Immersion	95	35.19	23	8.52
Mass Mobilization	62	22.96	19	7.04
Outreach Activities	71	26.3	23	8.52

Examining how the employees find out the volunteering opportunities given by CSA, 71.48% stated that they find out about it through email announcements, 52.59% are from their friends and 32.22% through poster campaigns. These numbers supports the qualitative data which states that employees are encouraged to volunteer in CSA particularly their initiative, participant #25 stated that “the felt need to respond to the needs of the victims/survivors of disasters,” and that the “political situation of the country that compels me to do something” according to participant #250.

Another theme rose that encourages the employees are testimonies, participant #239: “colleagues who previously joined volunteering opportunities,” participant #239 stated that “colleagues who previously joined volunteering opportunities,” inspired them to volunteer” and that others were inspired by their own personal experiences as well, participant #20 shared that “during my first exposure in community service, it is where in I find value in what I do.” Also, the employees pointed out that marketing campaign also encouraged them to volunteer, participant #112 shared that “personal invite, attending symposiums, and email invitations” really helps in encouraging employees to volunteer,” and participant #112 affirmed that “email invitation” is enough to raise awareness on volunteering activities offered by CSA. Furthermore, other employees stated that they are encouraged in volunteering because of professional development. Participant #55 shared that “volunteering hones my teaching skills,” and participant #71 stated that volunteering “is a good way of getting involved in the school's mission, it is fun, and it is a good way to meet people.” These themes affirms the Human Capital Theory which states that volunteerism is an avenue which a person can increase their human capital strengths by gaining skills, contacts, education and enhancement (White, 2008).

We asked the employees if they had volunteered in the College, 54% admitted that they have already volunteered, while 45.9% honestly stated that they have not yet volunteered. These numbers also supports the qualitative data which asked about what discourages them to volunteer in CSA, and has yielded themes which employees liberally states that work schedule is a factor why they decline participation in volunteering activities.

Participant #217 shared that volunteering opportunities in CSA “conflicts with regular work and part-time teaching schedule,” and participant #125 shares that similar opinion, which states that “tight working schedule, and schedules that are conflicting against family and church

time on weekends.” Also, employees identified management support that causes them to decline in volunteering activities. Participant #3 shared that volunteer work “might not be approved by our immediate supervisors,” and that the “school policies such as to whether they will file official business or not during events, and seeking permission from top admin,” according to participant #143.

The employees also mentioned that they are discouraged by the volunteering program itself. Participant #134 stated that “some volunteer efforts are not sustainable,” and that “organizers (CSA) and the participating community have unclear expectations from the volunteers, and the program output as well” according to participant # 138. Employees also suggested that “slight recognition from the Benildean community” according to participant #11, like “certificates or tokens,” stated by participant #62 or as blatantly expressed by participant #59 who quipped that “a bit of honorarium” might entice them to join the volunteering activities. Proximity was also raised by the employees as factors why the decline in volunteering activities. Participant #161 stated that “the venues/location which are sometimes quite far” and that “making a difference in far-flung communities is good, but what about the issues right outside the campus gates?” according to participant #33.

And lastly, the employees’ personal concerns are also a factor why they decline. Participant #109 who shared that “I’m mostly limited by my health concerns,” while participant #51 admitted that “I’m not sure if I’m capable in handling certain program that I wanted to volunteer to, like computer training.” These qualitative findings solidly affirms the theoretical framework presented, which suggests that the employee’s attitude towards volunteering, the subjective norms, and particularly the perceived behavioral control that affects their belief as to whether they can participate or not, may increase or decrease their intention to volunteer, which directly affects their involvement in volunteering activities given by CSA.

In order to achieve the objective of the study, binary logistic regression was performed using IBM SPSS to run the data. Nine independent variables were selected to evaluate their impact on the likelihood that an employee will be willing to participate in volunteering activities in school, which is the dependent variable. Two of which are continuous and the rest are categorical, and are represented by dummy variables. The following are selected as variables: (1) age, (2) years of stay in the college, (3) sex, (4) civil status, (5) educational attainment, (6) employment category, (7) if they have past volunteering engagement in any organization, (8) if they had any volunteering experience in the college and (9) if they already volunteered in CSA before. Results of data analysis on binary logistic regression show that the full logistic regression model was statistically significant. This means that all the nine independent variables significantly predicted the dependent variable, which is employees’ willingness to engage in volunteering activities in the future (i.e.,  $\chi^2 = 126.007$ ,  $df = 14$ ,  $N = 270$ ,  $p < 0.005$ ).

The odds ratio predicts the likelihood of the dependent variable, which is willingness to engage in volunteering activities in the future. Among the nine predictors, three made significant contributions in predicting the dependent variable. These are as follows: (a.)

Bachelor’s Degree, (b.) Masters Units as their educational attainment, and (c.) if they already volunteered in Center for Social Action. Having masters units in their educational attainment shows a strong relationship to willingness in engaging to volunteering activities in the future. It has an odds ratio of 74.512, specifying that an employee with masters units in

his/her educational attainment is 74.512 times more likely to be willing to engage in volunteering activities in the future than a person who graduated doctorate degree, holding other factors constant. The other one is if an employee who has only bachelor's degree as his/her educational attainment is 48.992 more likely to be willing to volunteer. Lastly, having an experience in volunteering activities in CSA tend to have 8.127 more likely to volunteer again in the Center compared to those who did not, holding all other factors being constant. Table 5 shows the result of the logistic regression.

**Table 5: Model Summary**

Willingness		B	Std. Error	Wald	df	Sig.	Odds Ratio
Yes	Intercept	0.976	2.152	0.206	1	0.650	
	Age	-0.030	0.040	0.581	1	0.446	0.970
	Years of Stay	-0.034	0.052	0.421	1	0.516	0.967
	[Sex = 1]	0.466	0.540	0.745	1	0.388	1.593
	[Sex = 0]	0 <sup>b</sup>	.	.	0	.	.
	[CivilStatus = 1]	-0.897	0.543	2.723	1	0.099	0.408
	[CivilStatus = 0]	0 <sup>b</sup>	.	.	0	.	.
	[EducAttain = 1]	3.892	1.585	6.028	1	0.014	48.992
	[EducAttain = 2]	4.311	1.549	7.747	1	0.005	74.512
	[EducAttain = 3]	2.495	1.283	3.779	1	0.052	12.121
	[EducAttain = 4]	2.397	1.401	2.929	1	0.087	10.989
	[EducAttain = 5]	0 <sup>b</sup>	.	.	0	.	.
	[EmployCat = 1]	-1.981	1.160	2.918	1	0.088	0.138
	[EmployCat = 2]	-0.838	1.102	0.578	1	0.447	0.433
	[EmployCat = 4]	0.855	1.183	0.522	1	0.470	2.350
	[EmployCat = 5]	0 <sup>b</sup>	.	.	0	.	.
	[VolunInCollege = 1]	-0.181	0.741	0.060	1	0.807	0.834
	[VolunInCollege = 2]	0 <sup>b</sup>	.	.	0	.	.
	[CSAorNotCSA = 1]	2.095	0.899	5.427	1	0.020	8.127
	[CSAorNotCSA = 2]	0 <sup>b</sup>	.	.	0	.	.
	[PastVolunEngage = 1]	0.257	0.640	0.161	1	0.688	1.293
	[PastVolunEngage = 2]	0 <sup>b</sup>	.	.	0	.	.

## Conclusion

Overall, the theoretical framework and methodology used supported the overall objectives of this study, and was able to determine why employees fail to participate in its volunteering activities given by CSA. To which, the employees work schedule, the weak management support, the current volunteering program, the proximity of venue as well as their personal concerns are found to be contributors why majority of the employees fail to engage in volunteering activities despite their expressed need and high level of awareness on volunteering opportunities offered by CSA. Moreover, the likelihood of willingness to engage in volunteering activities decreases as one predictor increases, holding all other factors constant (i.e., Age,  $\beta=0.030$ ,  $p<0.446$ , Odds Ratio=0.970). Furthermore, the qualitative data affirms the fact that time constraints and weak administration support impedes the likelihood of engaging in volunteering activities.

## Recommendation

Based on the foregoing findings of the study, the following are the possible ways to improve the adult volunteering program, and this research as well, to which proponents recommends: (i) that CSA should improve marketing and promotion of its adult volunteering activities, (ii) increase support from the school management, (iii) work closely with Human Resource Department to improve volunteering policy for the employees, (iv) CSA should create a volunteering program that will fit to the limited time of the employees, (v) CSA should create volunteering activities that fits to the interests of the employees, (vi) explore volunteering opportunities in close proximity to the metro, (vii) provide recognition to those who volunteer, and lastly, (viii) use stratified random sampling with employment category as stratum to further represent the whole population for further studies.

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# Understanding Employee Preferences: Their Work Values, Environment, Interaction and Activities

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## Abstract

This descriptive study aimed to find out the preferred work values, environment, interactions, and activities of employees in a Maritime institution. A survey questionnaire was administered to a group of respondents composed of 146 faculty and non-teaching staff who represent the sample size from the total population of 231 employees. Varied preferences regarding these topics were discovered. Results of the study showed evidence that the employees place the highest value on spirituality, mutual respect, reaching goals, open communication, strong support system, cohesiveness, effective leadership, transparency, and recognition, among others. As a whole, they respond most positively to a fast-paced, result-oriented, and organized work environment. Building from the findings gathered the study recommends the alignment of the employees' preferences with the institution's core values and priorities. Since being recognized for their efforts and contribution is important to them, recognition must be given where and when it is deemed best. It is also recommended that more workshops must be held to provide the employees an opportunity to revisit their value system in relation to themselves and others in the organization. Priorities in relation to work must also be reassessed or redefined through these workshops.

**Keywords:** Institutional Research, Work Values, Work Environment, Work Interaction and Work Activities, SEAAIR 2016

## Introduction

Initiatives to include human considerations are mobilized in educational institutions to include inculcating values and motivations that bring about environmentally responsible behavior (Hansmann, 2010). Universities teach notions of norms and behaviors that add to "good," sustainable lifestyles (Sherren, 2006) and as such, certain sets of value systems become part of the formation for all the members of the academic community, teachers, administration, and students alike. Values are often heard side by side with the school's vision, mission statement, and culture. According to Urde (2003), well-established and maintained core values influence all kinds of decisions within organizations. Core Values are traits or qualities that are considered worthwhile because they represent an individual's or the organization's highest priorities, deeply held beliefs, and core, fundamental driving forces. Urde (2003) further explains that core values need to be monitored and maintained.

It also fits that the employees should be provided with a positive work environment. A positive work environment makes employees feel good about coming to work every day. It provides them something to look forward to and serves as a motivation to sustain them throughout each day, no matter how hard and challenging the work is.

Employees also need to be provided with an atmosphere where they can interact smoothly with others in the organization. A positive work interaction breeds a positive and a healthy environment. It enhances employee commitment, performance, motivation, and empowerment. In an effective organization, employees are well-informed about the future directions of the organization and have an influence on decision-making processes (Cornelissen, 2008). This type of system combines upward and downward communication that are especially important during processes of organizational change to get employees to commit to the change and to make the change happen. Moreover Franz-Balsen and Heinrichs (2007) note that interactive processes are an essential feature of sustainable communication.

The employees of educational institutions will all the more be happy and productive if the work activities assigned to them would suit their abilities and capabilities as well as their preferences. It is ideally necessary that what is provided in the work environment must address those that the employees prefer to perform aside from their primary functions as educators and office personnel.

Several studies have tried to explain the influential roles of particular factors on employees' productivity and creativity at work. For instance, Amabile (1998) claimed that people will be most creative when they feel motivated primarily by their interest, satisfaction and challenge of the work itself and that organizational creativity begins with creative people and stems from the ability to do what you love and love what you do. In a study conducted by Isfahani, Hosseini, Khoshknab, and Khanke (2015), it was found out that support and encouragement of managers and colleagues, social admiration, and recognition are significant factors that trigger their creativity. Moreover, findings gathered by Daniel (2007) and Isfahani et al. (2015) placed the value of spirituality in the workplace and stated that spirituality could enhance personal well-being and could influence creativity in terms of motivation, social support and intention and receptivity. Steve (2013) further claims that by tapping into the employees' spiritual intelligence, creativity, motivation and performance could be enhanced.

Furthermore, several researchers have discovered possible influence to employees' characteristics of certain variables like gender, age, tenure, and nature of work. For instance, Akinbode & Fagbohunge (2011) found out that there is a statistically significant difference in the behavioral, emotional and overall organizational involvement of male and female workers for the women. They also discovered that female workers show higher emotional and cognitive involvement than their male counterparts and that employees whose tenure was over five years are more emotionally involved than those who are younger in the organization. Moreover, Patel (1999) found out that younger employees show less involvement and less organizational commitment than their middle and elderly age group counterparts. Vecchio & Boatwright (2002) examined gender and maturity (a combination of age and educational level) and found out that both are predictors of idealized styles of leadership. They discovered that employees with higher levels of education and greater job tenure expressed less preference for leader structuring (task-oriented behaviors). They also found that women (relative to men) expressed

greater preference for leader considerateness (relationship-oriented behaviors). Furthermore, Gambrell (2006) discovered that men and females prefer to approach work differently in that a higher percentage of women than men prefer to perform specific work activities that are directly identified with the organizations' products or services. On the other hand, a greater percentage of men than women prefer to initiate organizational level activities and perform work activities identifiable with the organizational goals and results.

Inspired by these studies relating to employees in the workplace, the researchers of this study tried to look into work situations preferred by the employees of a maritime institution, one of the three academic campuses of the only maritime university in the Philippines. The University as a leading maritime institution in the country places a high value on the importance of values formation and in sustaining its workforce. As such, the University includes among its Nine-Point Agenda, Agendum No. 5 (Inculcation Of Values) and 8 (A Competent and Productive Workforce). It upholds the core values of perseverance, loyalty, excellence, discipline, godliness, and equality (PLEDGE), and maximizes its efforts to ensure that all the employees are happy and contented with their work and with all the other factors that exist in the workplace such as their work environment, work interaction, and other activities assigned to them; hence, this study.

## **Framework**

This study is anchored on Frederick Herzberg's Two Factor Theory espoused by Robbins (2009) that names two sets of factors in deciding work attitudes and job performance in the workplace---

**Motivation and Hygiene Factors.** Motivation factors are intrinsic factors that increase job satisfaction, while Hygiene Factors are those that prevent employees' dissatisfaction. According to this theory, to satisfy employees, higher level needs (intrinsic or motivation factors) must be supplied. Furthermore, this theory explains that extrinsic factors or job context factors do not necessarily contribute to employees' motivation but could prevent dissatisfaction in the workplace. These factors provide a favorable work environment where employees feel comfortable working in. While intrinsic and extrinsic factors as espoused by Herzberg influence the employees' preferences in terms of work values, environment, interaction, and activities, these preferences also shape the kind of attitude and performance they manifest at work. Employers should obtain a clear understanding of their employees' dissimilarities in needs and preferences for motivation factors to boost up their performance towards overall organizational goal.

Work values are personal standards that are held in high esteem by an individual and is related to all aspects of one's personal and work life. Although there are contentions that these characteristics are innate, 'preferred work values' in this study are those that employees consider as crucial elements in the context of their workplace. The parameters set for determining the employees' preferred work values, environment, interaction, and activities were patterned from several readings on work values inventories but leaned much on the Work Values Inventory designed by Santa Cruz County Regional Occupational Program (ROP) which provides people with the opportunity to examine their preferences. Preferences on work values can be based on achievement, balance, independence, influence, integrity, honesty,

power, respect, spirituality, and status, depending on what constitutes the highest value in an employee's hierarchy of choice. Work Environment can be characterized as fast-paced, flexible, high earning, learning-oriented, accessible, predictable, quiet, relaxed, structured, and time-free. Work Interaction can be described by its leaning towards competition, diversity, friendship, leadership, management, open communication, recognition, support, teamwork, and trust. Finally, work activities can be analytical, challenging, creative, helping, leading edge, physical, requires public contact, research-oriented, risk-taking, and multi-varied. These concepts are expressed in the following diagram:

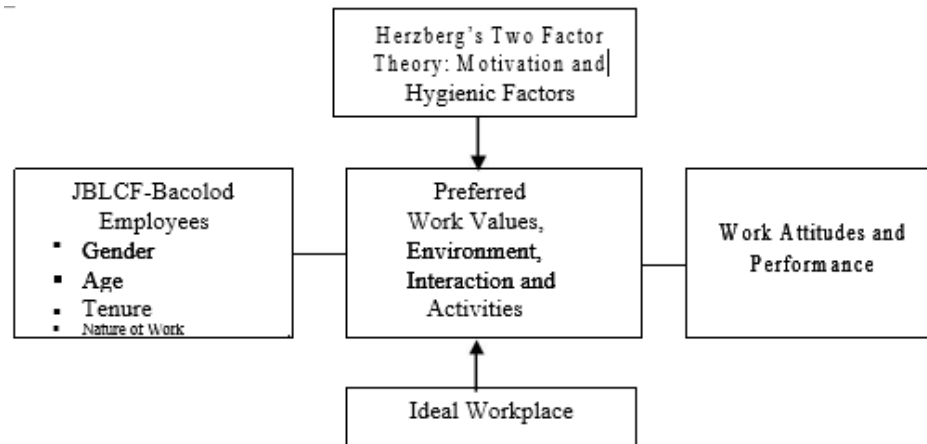


Fig1. Schematic Diagram of the Conceptual Framework

## Statement of the Problem

This study aimed to find out and compare the work values, environment, interactions, and activities preferred by JBLCF-Bacolod employees as they perform their work and interact with others in the organization. Specifically, the study sought to address the following questions:

1. What are on top of the preferences of the faculty and non-teaching staff when taken as a whole in terms of the following aspects?
  - 1.1 Work Values
  - 1.2 Work Environment
  - 1.3 Work Interactions
  - 1.4 Work Activities
2. Do the preferences of the employees in terms of work values, work environment, work interactions and work activities vary when they are grouped according to gender, age, tenure, and nature of work?
3. How do the employees describe their ideal work environment?

## Methodology

The descriptive design using survey method was used in this study. This design ensures that the evidence obtained enables one to effectively address the research problem as unambiguously as possible. It involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). The respondents of the study were 146 faculty and non-teaching staff of JBLCF-Bacolod who represent the sample size from the total population of 231 employees for the Second Semester of SY 2013-2014. Included among the 146 employees were 62 faculty members from the Maritime Department composed of 13 instructors from Allied and Applied Sciences, 4 Language, 16 Deck, 6 Engine, 13 Math, 3 P.E., and 3 Social Sciences and Research instructors; and 23 teachers from the Business Department. A sample of 61 were also randomly selected to represent the non-teaching staff. Stratified random sampling was used to compute the sample size. A researcher-made survey questionnaire patterned from the Work Values Inventory designed by Santa Cruz County Regional Occupational Program (ROP) was used to gather the data needed for the study. Face and content validity was obtained by submitting the questionnaire to a jury of experts who commented on some ways to improve the construction of the items. A reliability coefficient of 0.92 was obtained using Cronbach's alpha. The first part of the instrument was designed to get the profile of the respondents based on the variables considered in the study, i.e. gender, age, tenure, and workgroup (nature of work). The main portion of the survey questionnaire was divided into four parts where the respondents were made to rate their preferred core work values, environment, atmosphere, and activities using a four-point Likert Scale. The instrument also contained open-ended questions where the respondents described their "ideal workplace". To address problem 1, the *mean* and *rank* were used, while *t-test* and *Analysis of Variance* were employed to answer problem 2. The means obtained were interpreted using the following scale, verbal interpretation, and descriptive value:

Mean Range	Interpretation	Descriptive Value
3.25-4.00	Very Important	Always Valued
2.50-3.24	Important	Valued Most of the Time
1.75-2.49	Sort of Important	Valued Occasionally
1.00-1.74	Not Important	Given the Least Value

## Results

The employees have varied preferences in terms of the core work values, work environment, work interactions and work activities. These are shown in the succeeding tables and figures.

### **Preferred Work Values, Environment, Interactions, and Activities of the Faculty and Staff When Taken as a Whole**

Work Values. Table 1 reports that the employees place a very high value on spirituality, mutual respect, reaching goals, truth and propriety, openness, and balance between family, work, and pleasure. These findings, with spirituality on top, support the

contentions made by Steve (2013) on the value of spirituality as an intrinsic factor that could enhance personal well-being and creativity in terms of motivation, social support and intention and receptivity.

**Table 1:** Preferred work values of the faculty and non-teaching staff

Work Values	Mean	sd	Rank	Interpretation
Achievement	3.71	0.47	3	Very Important
Balance	3.66	0.47	5	Very Important
Independence	3.62	0.55	7	Very Important
Influence	3.34	0.66	8.5	Very Important
Integrity	3.64	0.52	6	Very Important
Honesty	3.67	0.67	4	Very Important
Power	2.94	0.77	10	Important
Respect	3.73	0.47	2	Very Important
Spirituality	3.86	0.34	1	Very Important
Status	3.34	0.76	8.5	Very Important
<b>Total</b>	<b>3.55</b>	<b>0.64</b>		<b>Very Important</b>

Work Environment. The employees respond most positively to a fast-paced, result-oriented, and organized work environment that is accessible and convenient and that could offer them financial opportunities and stability. Also, they place a high value on trust, open communication, and friendship. The rest of the results are shown in Table 2.

**Table 2:** Preferred work environment of the faculty and non-teaching staff

Work Environment	Mean	sd	Rank	Interpretation
Fast-paced and result-oriented	3.63	0.51	1	Very Important
Flexible	3.14	0.77	10	Important
High Earning	3.40	2.56	5	Very Important
Learning	3.58	0.52	2	Very Important
Location	3.51	0.57	3	Very Important
Predictable	3.31	0.72	7.5	Very Important
Quite	3.34	0.65	6	Very Important
Relaxed	3.15	0.76	9	Important
Structured	3.50	0.52	4	Very Important
Time Freedom	3.31	0.75	7.5	Very Important
<b>Total</b>	<b>3.39</b>	<b>1.03</b>		<b>Very Important</b>

Work Interaction. The preferred work interaction of the employees as presented in Table 3 is characterized by a strong support system and cohesiveness and of working together for the attainment of a common goal. They respond best to effective leadership, and it is crucial for them that their efforts and contributions are acknowledged and recognized. Moreover, they also value transparency, that information, where they are a critical part, is not held back from them by the administration, and that socialization is established with their co-workers. These findings parallel those pointed out in Happiness Research: Benefits to Make Staff Happy (2007) that place a high emphasis on social status, recognition, strong reward system, and the support and encouragement of managers and colleagues in the workplace.

**Table 3:** Preferred work interaction by the faculty and non-teaching staff

Component	Mean	sd	Rank	Interpretation
Competition	2.59	0.91	10	Important
Diversity	3.10	0.68	9	Important
Friendship	3.38	0.76	8	Very Important
Leadership	3.65	0.59	4	Very Important
Management	3.67	0.54	3	Very Important
Open Communication	3.42	0.65	7	Very Important
Recognition	3.59	0.63	5	Very Important
Support	3.70	0.54	2	Very Important
Teamwork	3.72	0.49	1	Very Important
Trust	3.57	0.66	6	Very Important
<b>Total</b>	<b>3.44</b>	<b>0.74</b>		<b>Very Important</b>

Work Activities. Results in Table 4 reveal that the employees are best tuned in for work activities that allow creativity and sharing of ideas, skills, and talents and bringing in innovative ideas to produce results. They are also best inclined towards analytical types of activities which engage them to seek continuously for new information and solutions. Knowing what the employees prefer to engage in in terms of work activities is essential because, according to Amabile (1998), people become most creative and motivated when they are interested, satisfied, and challenged by the work itself. Organizational creativity begins when people love what they are doing.

**Table 4:** Preferred work activities by the faculty and non-teaching staff

Work Activities	Mean	sd	Rank	Interpretation
Analytical	3.38	0.61	5	Very Important
Challenging	3.36	0.69	6	Very Important
Creative	3.47	0.62	3	Very Important
Helping	3.65	0.51	1	Very Important
Leading Edge	3.48	0.61	2	Very Important
Physical	3.05	0.84	10	Important
Public Contact	3.26	0.67	8	Very Important
Research	3.42	0.66	4	Very Important
Risk Taking	3.20	0.75	9	Important

Variety	3.34	0.70	7	Very Important
<b>Total</b>	<b>3.36</b>	<b>0.70</b>		<b>Very Important</b>

## Work Values, Environment, Interaction, and Activities of the Faculty and Non-Teaching Staff When Grouped according to Gender, Age, Tenure and Nature of Work

### According to Gender

Table 5 reveals that there is no significant difference in the preferences of the employees in terms of work values [ $t(144) = -0.48, p = .37$ ] and work environment [ $t(144) = -4.07, p = 0.09$ ]. These findings indicate that both male and female employees attribute the same preference to the various indicators for work values and work environment.

On the other hand, a significant difference was noted in the preferences of male and female employees in terms of work interactions [ $t(144) = 4.60, p = 0.00$ ] and work activities [ $t(144) = 1.99, p = 0.03$ ]. It can be said that the male employees express a higher preference to the various indicators of work interactions than their female counterparts.

**Table 5:** Preferences of the employees in terms of work values, environment, interactions and activities when they are grouped according to gender

	Gender	Mean	SD	df	t	p
Work Values	Male	3.54	0.19	144	0.48	0.37
	Female	3.56	0.19			
Work Environment	Male	3.38	0.19	144	4.07	0.09
	Female	3.49	0.23			
Work Interaction	Male	3.50	0.13	144	4.60	0.00*
	Female	3.38	0.22			
Work Activities	Male	3.40	0.30	144	1.99	0.03*
	Female	3.32	0.22			

\*Significant at 0.05 alpha level of significance

A more detailed analysis of the data on work values revealed that while both groups value spirituality on top of everything, male employees are very particular with protecting their self-image as evidenced by their preference for achievement, power, and status as well as on achieving a balance between family, work, and pleasure. Female employees, on the other hand, put more importance on those that are more “intrinsic” such as independence, integrity, honesty, and respect.

Both male and female groups prefer a work environment that is fast-paced and result-oriented, intellectually challenging, organized, and close to work while female employees prefer as second a work environment which has the potential to make much money. Male employees, in particular, choose a job environment that is intellectually challenging, organized, structured, convenient, accessible and predictable. While both groups interact best under good leadership and management and thrive best in relationships characterized by support, trust, and teamwork, male employees place a greater value on competition and diversity.

In addition, both groups are equally inclined to work activities that involve helping people, searching for new information, require working on new and innovative projects, and creativity. It is the male group, however, significantly place a greater value for work activities that are analytical, challenging, involving public contact, and risk-taking. Uniquely, it is the female group who place more value on work that implies a lot of physical activities.

### According to Age

Results presented in Table 6 reveal that the preferences of the employees on work values [ $F(2, 143) = 3.94, 0.02 < 0.05$ ], environment [ $F(2, 143) = 5.58, 0.01 < 0.05$ ], interaction [ $F(2, 143) = 14.58, 0.00 < 0.05$ ], and activities [ $F(2, 143) = 20.51, 0.00 < 0.05$ ] significantly differ when they are grouped according to age. In addition, Post hoc comparisons using the Tukey HSD test indicated that on work values and work environment, it is the preferences of employees who belong to the oldest group (41 and above) that significantly differed far from the other age groups.

On work interaction, data showed that there is a significant difference between the mean scores of employees aging 31 to 40 years old and 20 to 30 years old; between 20 to 30 years old and 41 years old and above; and between 31 to 40 years old and 41 years old and above. It can be said that preferences on work interaction differ significantly across all age groups. This implies that employees tend to interact more effectively with colleagues who belong to the same age group.

Finally, on work activities, data revealed that the mean score of the employees aging 41 years old and above significantly varied from the mean scores of employees aging 20 to 30 years old. A significant difference was also noted between those who are 41 years old and above and 31 to 40 years old.

However, mean scores obtained by employees whose ages range between 20 to 30 years old did not significantly differ from the average scores obtained by employees aging 31 to 40 years old. These results could mean that differences in work activities can be more felt among older employees.

**Table 6:** Preferences of the employees in terms of work values, environment, interactions and activities when they are grouped according to age

	Age	Mean	SD	F <sub>(2,143)</sub>	p
Work Values	20-30	3.56	0.19	3.94	0.02*
	31-40	3.49	0.19		
	41 & above	3.59	0.19		
Work Environment	20-30	3.31	0.23	5.58	0.01*
	31-40	3.41	0.17		
	41 & above	3.44	0.20		
Work Interaction	20-30	3.44	0.20	14.58	0.00*
	31-40	3.57	0.16		
	41 & above	3.11	0.34		

Work Activities	20-30	3.40	0.37	20.51	0.00*
	31-40	3.32	0.21		
	41 & above	3.59	0.29		

\*Significant at 0.05 alpha level of significance

A more detailed comparison of the data also revealed interesting results. Older employees appeared to attribute the highest preference on *respect* next to spirituality while those who are 31 to 40 years old place the highest value on achievement. Employees who are 30 years old and younger are more directed towards learning. It is the oldest group (41 years old and above) who prefer a work environment that is closer to home, quiet, relaxed, and time-free while it is the youngest group (20 to 30 years old) who place the highest value on a predictable kind of work environment. Moreover, the middle group (31 to 40 years old) consider a work environment that is high-earning. Since this group also puts the highest preference on achievement, it is likely that they want a controlled work environment where they are aware of what will take place every day. This preference on predictability, however, is lowest among the oldest group. Furthermore, employees across ages value the following in common: management, recognition, support, teamwork, and good leadership. Employees across ages prefer the most work activities that involve helping people. The youngest group (20 to 30 years old) respond best to work activities that are analytical and varied while older employees (31 years old and above) value work activities that involve working on new and innovative projects and searching for new information and using their imagination and creative talents to produce results.

### According to Tenure

Table 7 reveals a significant difference in the preferences of the employees on work values [ $F(3,142)=8.23$ ,  $0.00<.05$ ], work environment [ $F(3,142)=9.54$ ,  $0.00<.05$ ], work interaction [ $F(3,142)=14.07$ ,  $0.00<.05$ ], and work activities [ $F(3,142)=10.41$ ,  $0.00<.05$ ] when they are grouped according to tenure. Furthermore, Post hoc comparisons using the Tukey HSD test revealed that this significant difference is prominent between the longest-staying employees and those who are in their first 1 to 5 years with the school but not significantly different among younger groups of employees (1-5 vs. 6-10 and 6-10 vs. 11-15). In terms of work interaction, the preferences of the employees significantly differed across groups except between employees with a tenure of 1 to 5 and 6 to 10 years, and between 1 to 5 and 16 years and above years of service. Finally, on work activities, data showed that there is a significant difference in the preferences of employees across groups, except for those between 1-5 years of tenure and 16 years and above, and between 11-15 years of tenure and those with 16 years and above.

**Table 7:** Preferences of the employees in terms of work values, environment, interactions and work activities when they are grouped according to tenure (years of service)

	Tenure (in years)	Mean	SD	F <sub>(3,142)</sub>	p
Work Values	1-5	3.56	0.15	8.23	0.00*
	6-10	3.50	0.19		
	11-15	3.44	0.15		
	16 & above	3.69	0.15		
Work Environment	1-5	3.41	0.21	9.54	0.00*
	6-10	3.55	0.18		
	11-15	3.28	0.19		
	16 & above	3.32	0.24		
Work Interaction	1-5	3.50	0.21	14.07	0.00*
	6-10	3.60	0.16		
	11-15	3.27	0.21		
	16 & above	3.38	0.15		
Work Activities	1-5	3.40	0.32	10.41	0.00*
	6-10	3.58	0.18		
	11-15	3.20	0.17		
	16 & above	3.29	0.18		

\*Significant at 0.05 alpha level of significance

### According to Nature of Work

Results presented in Table 8 reveal that when grouped according to their nature of work (teaching or non-teaching), a significant difference exists in their work environment, work interaction, and work activities. However, they seem to be held together by the same work values.

**Table 8:** Preferences of the employees in terms of work values, work environment, work interactions and work activities when they are grouped according to nature of work

	Nature of Work	Mean	SD	df	t	p
Work Values	Non-Teaching	3.56	0.15	144	0.90	0.37
	Teaching	3.54	0.17			
Work Environment	Non-Teaching	3.32	0.14	144	-4.07	0.00*
	Teaching	3.45	0.20			
Work Interaction	Non-Teaching	3.36	0.24	144	-4.60	0.00*

Interaction	Teaching	3.52	0.18			
Work Activities	Non-Teaching	3.32	0.34	144	-1.99	0.00*
	Teaching	3.41	0.20			

\*Significant at 0.05 alpha level of significance

A more detailed analysis of the data further revealed that both the teaching and non-teaching employees place spirituality on top of their core values. They also share in common the value of respect, achievement, and balance although the non-teaching personnel have added to this list the value of honesty. For both groups, power is placed at the bottom of the list. It can also be observed that the faculty places a greater value on achievement, independence, influence, and power compared to the non-teaching staff. On the other hand, the non-teaching personnel place a greater value on balance, integrity, honesty, and status.

Foremost among the teaching employees is a work environment that is fast-paced and result-oriented, learning-oriented and structured while for the non-teaching, it is that which is high-earning, learning-oriented, and fast-paced and result-oriented. Data also show that the teaching group places a greater value on a work environment that is fast-paced and result-oriented, flexible, learning-oriented, and structured. On the other hand, it is the non-teaching group who give more value to a work environment that is high earning, accessible and convenient, predictable, quiet, relaxed, and time-free.

Both groups share the same preference for teamwork, management, and support. Moreover, they share the same preference for work activities that allow them to help others, require them to work on new and innovative ideas and engage their imagination and creative talents to produce results.

### **The Employees' Ideal Environment**

JBLCF-Bacolod employees prefer a work environment where honesty and fair exercise of leadership prevails. They highly value integrity among the school leaders and expect people within the organization to do their best to reach their goals without taking advantage of others. They also prefer a friendly atmosphere where everyone is given the opportunity to interact and even showcase their skills and talents. The employees wish for an environment where rewards and motivation is highly encouraged. They also consider very important that their workplace be stress-free and a place where teamwork is apparent. Lastly, the faculty and staff prefer a safe, pollution free, and a clean work environment.

### **Conclusion and Implications**

The faculty and staff of JBLCF-Bacolod have varied preferences in terms of core work values, work environment, work atmosphere, and work activities. A slight difference on these preferences is present when factors such as gender, age, tenure, and nature of work are considered. However, although individual differences on these aspects are present, a general description of these preferences can be gathered when they are taken as a whole. It can be useful for the administration then to consider the individualities as well as the characteristics that are commonly

shared by the employees. The employees' esteemed preference on spirituality, truth and propriety jives with one of the core values of the University which is Godliness. Such creed reflects a God-fearing attitude that characterizes a conscientious mindset that could ensure high morals and dignified service. As what Daniel (2007), Isfahani et al. (2015), and Steve (2013) put it, the value of spirituality is an intrinsic factor that could enhance personal well-being and creativity in terms of motivation, social support and intention and receptivity. Moreover, the employees' preference on mutual respect, openness, and reaching goals as a team could promote cohesiveness, positive interaction, and solidarity. Consideration and sensitivity must be exercised with prudence by the administration to provide the employees the chance to create a balance between their work responsibilities and their personal affairs such as their families and their social life. Bombarding them with too much work at the expense of their family time and social life could possibly lead to negative behavior and less efficient work performance.

The employees respond best to a fast-paced, result-oriented and organized work environment. These preferences can be beneficial to the administration because it has a workforce that is driven by action and set goals. However, the employees also value financial opportunities and stability when it comes to their job. Job stability within a career field is a result of people finding environments reinforcing and satisfying (Dockins, 2004). Findings of Yousef (1998) revealed a significant relationship between job security and job performance; hence, a threat on the employees' job stability could weaken their enthusiasm and drive to perform their jobs at their best. Being recognized for their part and for their significant contribution to the organization's success is very important among the employees, particularly for those who have served the administration for a longer time. Tangible efforts must be done to give due recognition to those who deserved it.

Finally, since the employees are tuned in for work activities that allow creativity, sharing of ideas, skills and talents, and bringing in innovative ideas, it is best that they should be provided with continuous exposure to these activities and that they should be assigned tasks that could maximize their skills and talents.

## **Recommendations**

Leaning on the findings of this study, the researchers recommend that the school administration should find time to know and understand their employees' individualities and shared characteristics, and to give credence on the core values that they value the most. Knowing these about the employees, they could include such considerations every time they come up with decisions involving the faculty and staff. It is also recommended that in giving them extra assignments, they should be assigned in a team where they can excel best. An individual aptitude test can be conducted to identify their areas of interest and inclinations. Furthermore, visible efforts must be done to give recognition to the employees where and when it is deemed best. Workshops must also be provided to allow the employees an opportunity to revisit their value system in relation to themselves and others in the organization. Priorities in relation to work must also be reassessed or redefined through these workshops.

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# **The Influence of Organizational Culture on Job Performance among Personnel at a Public University in Thailand**

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## **Abstract**

Many researchers had reported the relationship between organizational culture and job performance. This research study aimed to investigate the influence of organizational culture upon employees' performance among personnel at one large university in Thailand. The population of the study was employees of the university. Organizational culture was classified into detail-oriented; outcome-oriented; people-oriented; team-oriented; competition-oriented; security-oriented and innovation-oriented cultures. Results revealed that detail-, outcome-, and security could significantly predicted job performance but people-, team-, competition-, and innovation-oriented culture could not determine job performance.

**Keywords:** Organizational Culture, University Personnel, Performance.

## **Introduction**

An organization is an entity that includes many people. These people come from different background and values. An organization binds them together and forms a commonly accepted rules and guidelines for behaviors of people within. Organizational culture originated from the founders and adjusted by the people. Upon working in an organization, people negotiate among each other for desired behaviors and form commonly accepted norms so they can work together smoothly. Organizational culture evolves from these common rules. Rules and guidelines that people accept tend to be kept and those which are not accepted are modified or eventually dropped over time. Organizational culture becomes the governing system of thought for people within.

This research paper had an objective to investigate the influence of organizational culture towards employees' performance in the context of a public university in Thailand. The results could provide a better understanding for policy maker regarding the preference of employees and could promote appropriate culture within the university.

## Literature

Organizational culture is a topic that leaders seek to understand. It has been studied by various researchers (Chen & Chen, 2009). Kreitner and Kinicki (2012) suggested that organizational culture is something that holds employees together. It serves as the mutual agreement among members of an organization. The identity of the members is formed with reference to the organizational culture. Employees use it as the guidance for appropriate behaviors (Faerman, 2009). In the context of a university, organizational culture is very important because it forms the societal norm of employees. It influences the values and behaviors of employees and serves as the personality and spirit of the organization. Waddell, Jones, & George (2013) suggested that organizational culture affects the ways employees think, feel and behave toward each other. University needs strong culture that could enhance employees towards the same goal, that is, to facilitate knowledge creation and learning process in order to excel in the administration of teaching and learning process.

Organizational culture was originally classified into a culture that emphasizes either task or people (Iroanya, 2012) based on Ohio Study and Michigan Study. Later on, researchers proposed considerations of other dimensions. Robbins and Coulter (2015) classified organization culture into 7 orientations:

Attention to detail orientation – a culture that valued control, accuracy and details of work flow.

Outcome orientation – a culture that prioritized results and achievement over methods of work, the end over the way.

People orientation – a culture that valued employees' feedback and take employees' concerns into decision making.

Team orientation – a culture that values working as teams.

Competition orientation – a culture that focuses on winning the competition and promote competition among employees.

Maintenance of security and status quo orientation – a culture that aimed to maintain the status quo and an uninterrupted work flow.

Innovation and risk taking orientation – a culture that promoted changes, innovation and risk taking behaviors.

These orientations were utilized as the construct for organizational culture in this research project.

## Methodology

This research project was a survey research. The population of the study was 4300 personnel of one leading public university in Thailand. There were several campuses but the numbers of employees were little compared to the main campus. The majority of employees were at the main campus. 1000 sets of questionnaire were distributed to all faculties. 347 usable sets of questionnaire were returned.

The questionnaire consisted of 3 parts. Part 1 was the demographic data of the respondents. Part 2 elicited the information from the respondents regarding their perceived organizational culture. Part 3 measured the respondents' self-reported level of performance in 9 dimensions of work at the university namely: quality of work, quantity of work, time spent for work, problem solving ability, adherence to discipline, work structure, knowledge in job, and the conservation of resources. 4-point rating scales were used in part 2 and 3 ranging from 1 = highly disagree, 2 = disagree, 3 = agree, and 4 = highly agree to avoid neutral or undecided data. A score of 1-1.75 was considered highly disagree, 1.76-2.50 was considered disagree, 2.51-3.25 was considered agree, and 3.26-4.00 was considered highly agree to the measurement (Tanchaisak, 2016).

## Results

284 respondents were female (81.8%) and 63 were male (18.2%). The majority aged between 34-44 years old (71.5%). Most held a bachelor degree (77.8%) and 20.7% held a degree higher than bachelor degree. The majority had worked with the university between 1-5 years (51.3%) followed by more than 10 years (23.3%), 6-10 years (20.2%), and less than 1 year (5.2%) respectively.

The respondents perceived the university had the cultures focused on the maintenance of security and status quo (mean = 3.11, SD = 0.63); teamwork (mean = 3.09, SD = 0.66); paying attention to detail (mean = 2.99, SD = 0.61); outcome oriented (mean = 2.95, SD = 0.64); people oriented (mean = 2.81, SD = 0.64); innovation and risk taking (mean = 2.78, SD = 0.60); and competition oriented (mean = 2.53, SD = 0.71) respectively (see table 1).

**Table 1:** Means and standard deviations of the employees' perception regarding organizational culture

Organizational Culture	Mean	Standard Deviation
Maintenance of security and status quo	3.11	0.63
Teamwork orientation	3.09	0.66
Paying attention to details	2.99	0.61
Outcome orientation	2.95	0.64
People orientation	2.81	0.64
Innovation and risk taking orientation	2.78	0.60
Competition orientation	2.53	0.71

Results from stepwise regression revealed that four types of organizational culture could predict the level of employees' performance at the significance level of .05. These were maintenance, outcome, teamwork, and detail oriented cultures. The Pearson correlation was 0.712. Variance of the four predictors could explain 0.508 of the variance of employees' performance. The ANOVA analysis confirmed the ability of the four types of cultures to predict employees' performance ( $F = 88.124$ ,  $df = 4$ ,  $p < .05$ ). People, competition, and innovation orientation cultures could not predict the level of employees' performance.

The standardized beta coefficient was 0.310 for maintenance oriented culture, 0.246 for outcome oriented culture, 0.169 for teamwork oriented culture, and 0.128 for detail oriented culture. All were significance at  $p = .05$ .

The predictive equation consisted of unstandardized beta coefficient.

Performance =  $1.067 + 0.249 \text{ Maintain} + 0.195 \text{ Outcome} + 0.129 \text{ Teamwork} + 0.106 \text{ Detail oriented}$

The regression table is shown in table 2.

**Table 2:** Regression coefficients of the prediction formula

	Unstandardized Coefficients	Std. error	Standardized Coefficients	t	Sig.
(Constant)	1.067	.112		9.513	.000
Maintain	.249	.042	.310	5.898	.000
Outcome	.195	.041	.246	4.704	.000
Team	.129	.040	.169	3.255	.001
Detail	.106	.044	.128	2.382	.018

Dependent Variable: Performance

## Discussion

Results revealed that maintenance culture had the highest predictive coefficient weight (beta = 0.249) followed by outcome orientation culture (beta = 0.195), teamwork orientation (beta = 0.129), and detail orientation culture (beta = 0.106) while people, competition, and innovation orientation cultures could not predict the level of employees' performance. It is possible that this university is highly bureaucratic and had a conservative characteristic which was reflected by the highest mean score of maintenance orientation culture but lowest for the innovation culture. Hence, maintaining of the status quo was the dominant norm of the university. This was preferred not only with those employees who had been working with the university for a long period of time because the majority of the respondents had been working between 1-5 years. The culture could transcend from generations to generations. The data confirmed that organizational culture governed the behaviors of employees. New employees were assimilated into the dominant culture and form work behaviors accordingly.

Employees in this university prefer not to change the work methods they were accustomed to, partly might due to the fact that this university is a public university which is subjected to many established formal procedures imposed by the government. Employees perceived they could not change the rules and regulations so they strived to maintain the status quo. However, contrary to what would normally be expected, such bureaucratic organization prioritized outcomes over methods. This resulted in the high means of the level of performance. Employees tried to achieve outcomes while following the rules and regulations. In this university context, performance was used as the measurement standard. As long as the rules were adhered to, an employee could do anything to achieve the objectives of the unit. Employees in this university preferred to work in team which was in accordance to the nature of Asian people whose culture is collective. The attention to details

was somehow relevant to the maintenance of the status quo and the formal procedures. Employees observed their behaviors carefully so as not to breach the formal rules and regulation.

## **Conclusion**

It was evident from the data that employees in this university could work well if they were provided with a set of prescribed procedure to follow. However, this procedure should be flexible enough for them to be a little bit out of the way, not too much though, in order to achieve the objectives. The preference for detail orientation confirmed that employees were careful to follow the procedures to a certain extent else they might be punished or evaluated negatively. If they came across a rule that obstruct their way, they would figure out some method of work that complies with the rule while enabling them to attain their goal.

The university should set clear rules and regulations for personnel to use as the guidelines for their operations in all area. Moreover, an attempt to link rewards to performance could further enhance the motivation for personnel to increase their efforts in their jobs.

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# Perceptions of University Professors in Taiwan towards Institutional Resource and Social Capital: Internal and External Perspectives

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## Abstract

Changes in social systems have demonstrated that various structural disadvantages have jointly led to increasing competition among higher education institutions (HEIs) in many countries, especially Taiwan. As the major concerns of HEIs are teaching, service, and research outcomes, this paper describes a nationwide evaluation of institutional performance in relation to management of HEIs. The study seeks understandings about the perceptions of faculties from Taiwanese HEIs regarding institutional resources, relations and performance, and adopts a survey approach. After choosing 30 HEIs of various sizes and from different geographical regions, 926 aculties were selected randomly as participants. Using structural equation modeling and ANOVA, this study explores the relationship among the variables. The results show that all relationships among the variables are statistically significant and positive, while significant mean differences were found between at least two groups. Finally, based on the results, this study provides some discussions, suggestions and managerial implications for HEIs and future studies

**Keywords:** Higher Education, Institutional Performance, Institutional Resource, Social Capital.

## Introduction

As the people-to-people competitive mode extends to the state-to-state one, globalized competition is becoming increasingly fierce and playing an ever-more important role in the development of higher education, so that the demographics and sizes of classes in higher education institutions (HEIs) have changed accordingly. Due to the ever-changing nature of higher education, the previous static view cannot be applied to the current environment. Specific to the changes seen in HEIs, it is of great significance to ensure the quality and fairness of teaching and learning (Maringe & Sing, 2014).

In 2014, the stagnant economy has led to the total fertility rate (TFR) down to 1.11 in Taiwan, as compared with Japan 1.40, South Korea 1.25 and Singapore 0.80. Besides, Taiwan's college enrollment rate by college entrance examination is above 95% in recent years. In this connection, Taiwanese HEIs have been approaching saturation in terms of their development intensity, so as to their education pattern has been transformed from elite education to mass education (Taylor et al., 2013). In particular, after joining the World Trade

Organization (WTO) in 2001, Taiwan opened up the education market, which brought about fiercer competition among HEIs, and, in turn, new dilemmas and challenges (Shin & Harman, 2009). These various disadvantages have jointly caused the imbalance between supply and demand of the higher education market. Therefore, exploring the development and performance of Taiwanese HEIs is an interesting research avenue, and the results will be also beneficial to HEIs of different countries in similar situations.

By referring to discussions in the literature about organizational management, we can further understand the keys to success. From a systematic viewpoint, factors that influence organizational operations can be roughly divided into internal and external. In terms of internal factors, scholars have focused on the quantity and attributes of internal resources using the resource-based view (RBV) (Barney, 1991). They have suggested that the development and performance of an organization depends on the quantity of resources it owns (Barney, 1991). Furthermore, the corresponding measurement of resources is classified into reputation (Boyd et al., 2010) and slack resources (O'Shea et al., 2005; Su et al., 2009; Voss et al., 2008), which are essential factors within the RBV.

Although the internal resource perspective emphasizes that the conditions of development and operation can be created by HEIs internally, it neglects the channels by which external resources and knowledge are acquired (Walter et al., 2006). Due to the intangibility, ambiguity, and social embeddedness of knowledge and resources, external relations have become key factors in absorbing external resources (Leana & Pil, 2006). The emergence of the relational perspective complements the shortcomings of the RBV, and external relations contribute substantially to the performance of HEIs. Relational resources may be derived from HEIs both internally and externally, and bring benefits to organizations simultaneously (Adler & Kwon, 2002). Therefore, studies focused on both internal and external factors should extend the theory and concept for combination with multi-type social capitals.

In exploring the influence of social capital and resources on HEI performance, we must take into account the fact that there are notable differences between Taiwanese HEIs in terms of sizes and geographical features. Differences in the light of institutional size will help us understand which HEIs have better perceptions of performance in each factor, and what priority tasks for these HEIs are in order to enhance performance, according to their size. Besides, examining HEIs with reference to their regions is also important since regions vary in terms of their infrastructure and industrial structure. While northern Taiwan includes the most and largest HEIs, which have well-established physical and human resources, many southern HEIs struggle with a lack of resources. Therefore, it is of great significance to account for the size and geographic location of HEIs when investigating faculties' perceptions of institutional resources and social capital.

However, this study will contribute to drawing a clear picture of the current situation in Taiwanese HEIs in terms of faculties' levels of perception of, and the relationships between, institutional resources, social capital, and performance. It is aimed to improve HEIs' governance in resource investment and performance, so as to face the highly variable educational market situation and cross-country and cross-region competitive pressures. Also, through investigation and understanding of HEIs in Taiwan, inference is drawn on countries with similar population structure and development of higher education system, like Japan and South Korea.

## **Literature Review**

### **Resources of Higher Educational Institutions**

The RBV emphasizes that the exploration of “internal” organizational resources is a type of strategic logical behavior (Barney, 1991). Although the RBV has been widely used and developed in studies conducted on for-profit organizations, it can also help us to understand the operation of HEIs for the following reasons. Firstly, HEIs look for survival and development opportunities in a competitive environment that often entails dramatic changes to the industrial structure (O’Shea et al., 2005), but the competition between HEIs for financial and human capital resources mainly lies in raising research funds and recruiting suitable teachers and students (Boyd et al., 2010). Secondly, similar to enterprises, HEIs often suffer from resource shortages, while maintaining institutional operations and academic research requires huge expenditures; thus, administrators must make additional efforts to keep resources effectively and efficiently (Ryan, 2005). Moreover, although HEIs have previously been able to avoid market competition, the current low birth rate in Taiwan has intensified inter-institutional competition, which is as fierce as perfect competition (Powers & McDougall, 2005). Therefore, with respect to the attributes of resources that influence the development of HEIs, this study aims to evaluate the attributes of both tangible and intangible resources, where the tangible resource view focuses on institutional slack and the intangible resource centers on reputation (Powers & McDougall, 2005; Ryan, 2005).

#### **Institutional Slack**

In strategic and organizational studies, size is always deemed a significant variable. Some theories hold that, compared to smaller organizations, large organizations were provided with competitive advantages because of more slack resources. These potential and available resources can be used to realize the organization’s goal and ensure ideal performance of the organization through transfer or reallocation. Under the high uncertainty of education policy transformation, the influence of slack on the performance of Taiwanese HEIs is especially important (Su et al., 2009; Tan & Peng, 2003).

#### **Institutional Reputation**

The RBV regards reputation as a type of intangible asset consisting of internal investment and external evaluation (Dowling, 2001; Roberts & Dowling, 2002). From this perspective, reputation can be defined as a series of general organizational characteristics (Roberts & Dowling, 2002). The value generated from the relationship between these characteristics will develop into causation and competitive advantages, and will finally generate performance advantages (Barney, 1991; Boyd et al., 2010). Specifically, reputation can also lower uncertainty through the transfer of valuable information. In studies on educational institutions, scholars have defined reputation according to (1) a social cognition, such as knowledge, impression and feeling; and (2) social cognition depending on the minds of external observers (Boyd et al., 2010).

#### **Social Capital**

Social capital was defined as “the aggregate of the actual potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Bourdieu, 1986, p. 248). Nahapiet and Ghoshal (1998) regarded social capital as a kind of organizational resource, and defined it as the

current or potential embedded resources obtained by individuals or social units, or transferred from social relationships.

Kharouf, Sekhon, and Roy (2014) indicated, from the perspective of building strong ties with students, that enhancing students' trust on HEIs would be helpful to raise student satisfaction and retention, and furthermore provide an effective word-of-mouth description of their respective HEIs. However, drawing from the arguments of Adler and Kwon (2002), and Leana and Pil (2006), this study discusses the relationship between social capital and HEI performance, and verifies the results from an integrated viewpoint. Here, social capital can be considered as being divided into internal and external.

#### **Internal Social Capital**

Internal social capital can be defined as structural and relational content between individuals within the organization (Adler & Kwon, 2002). Nahapiet and Ghoshal (1998) summarized previous studies and proposed that social capital consists of structural, relational, and cognitive dimensions. The structural dimension presents all the patterns of ties between network members, and explores whether they can obtain an advantageous position in the relationship network. Another role that information sharing plays in enhancing competitive advantages is encouraging individuals to learn in a context of profound meaning (Leana & Pil, 2006). In the relational dimension, relationships are accumulated via a long-term interactive process (Nahapiet & Ghoshal, 1998) in which behavioral norms are developed between members by mutual trust, shared value, and interpersonal recognition. In particular, trust is the key factor in establishing a social network, which means that organizations should trust that members have the ability and willingness to exchange or combine knowledge, and lower the risk inherent in knowledge exchange (Kharouf et al., 2014; Leana & Pil, 2006). The cognitive dimension involves the common expression, interpretation, and implications of social members, which can unify the behaviors of individuals.

#### **External Social Capital**

External social capital mainly relates to the repeated connections (resources, relationships, and information) between a group of actors (individuals, groups, and organizations); it also explores why actors conduct specific interactions in different environments, what results will be produced by such interactions, and the position of the actors in the relationship network (Laursen et al., 2012). With the opening of Taiwan's education market, the educational environment became much less easy to predict and control. In addition to exploiting existing resources and capabilities more effectively, HEIs should also establish partnerships with other organizations in order to obtain more knowledge and abilities, to overcome the challenges brought about by the environment, and maintain competitiveness (Adler & Kwon, 2002; Leana & Pil, 2006). Therefore, establishing external social capital will facilitate institutions to share risk and new technology, enter the market, and supplement each other with economies of scale and technological advantage.

## **Methodology**

### **Sample and Data Collection**

The research was conducted in Taiwan and the survey employed a stratified random sampling method to collect data from 63,238 full-time faculties of 161 Taiwanese HEIs. The database is taken from the annual list published by website of MOE, which conducts all information of Taiwanese HEIs. While assembling the sample for the study, location

(northern, central and southern), classification I (public university and private university), classification II (general university and university of technology ) and size (large, medium and small) served as the criteria for HEIs selection, since these were assumed as defining features of HEIs in Taiwan. Accordingly, 30 HEIs in defined size (3 large, 9 medium and 18 small), location (10 HEIs each), classification I (15 HEIs each) and classification II (15 HEIs each), were randomly selected, and about 3.2–7.0% of faculties at each HEI were randomly selected in turn. The survey packages were sent by post to a total of 2,000 faculties of 30 HEIs in 2014. Each survey package contained a covering letter explaining the survey purpose, a survey instrument and a postage-paid envelope.

A total of 926 valid survey instruments were returned, for an effective response rate of 46.3%. According to the data gathered, 588 of the faculties (63.5%) were from northern HEIs; 209 (22.6%) from central ones; and 129 (13.9%) from southern ones. Specifically, there were 301 faculties (32.5%) from small HEIs, 443 (47.8%) from medium ones, and 182 (19.7%) from large ones; 29.4% of sampled faculties were from public HEIs and 70.6% from private ones. In terms of respondent demographic profiles, 66.8% of the respondents were males and 33.2% were females; moreover, 20.4% of the respondents were aged below 40 years old, 22.8% were between 41~45, 20.0% were between 46~50, and 36.8% were over 51; 24.6% were professors, 34.6% were associate professors, and 40.8% were assistant professors.

### **Measurement**

All scales used in this study were found to be reliable, with Cronbach's  $\alpha$  ranging from 0.77 to 0.91 in Table 2. In order to gauge validity, this study employed confirmatory factor analysis (CFA) to verify the construct validity (both convergent and discriminant) of the scales. Hair et al. (2006) recommended convergent validity criteria as follows: (1) standardized factor loading of higher than 0.7; (2) average variance extracted (AVE) above 0.5; and (3) composite reliability (CR) above 0.7. The evaluation standard for discriminant validity is the square root of AVE for one dimension greater than the correlation coefficient with any other dimension(s). Results showed that standardized loadings ranges from 0.65 to 0.83, most of which exceeded 0.70 threshold value. As Table 1 indicates, all three criteria for convergent validity were met, and correlation coefficients were all less than the square root of the AVE, suggesting that each dimension in this study had good discriminant validity.

**Table 1:** Assessing the convergent validity and discriminant validity of constructs

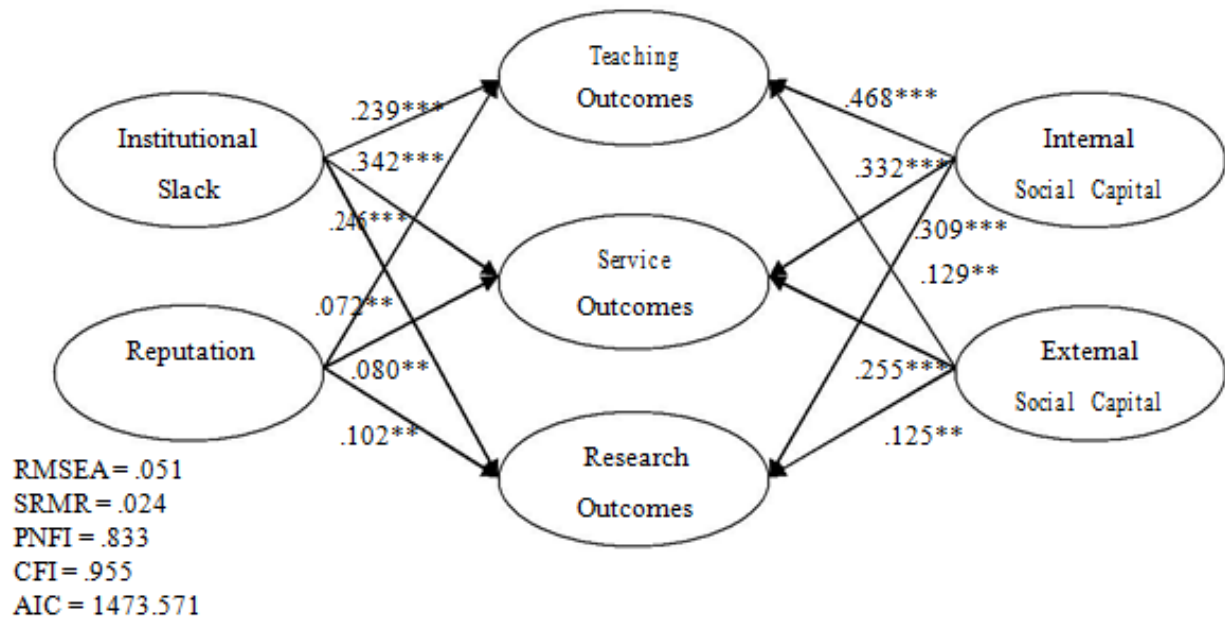
Variables	1	2	3	4	5	6	7	8	9	10	11
1. Size	-										
2. Slack	.16**	(.74)									
3. Reputation Information	.24**	.59**	(.81)								
4. sharing	.20**	.62**	.54**	(.76)							
5. Trust	.21**	.61**	.61**	.82**	(.81)						
6. Shared vision	.18**	.63**	.60**	.77**	.82**	(.84)					
7. Social interaction Political	.15**	.62**	.56**	.61**	.62**	.64**	(.78)				
8. participation Teaching	.12**	.50**	.45**	.52**	.50**	.54**	.67**	(.78)			
9. outcomes	.17**	.63**	.58**	.66**	.66**	.69**	.60**	.51**	(.81)		
10. Service outcomes	.16**	.70**	.61**	.68**	.70**	.69**	.67**	.56**	.74**	(.71)	
11. Research outcomes	.15**	.55**	.52**	.54**	.56**	.57**	.53**	.39**	.61**	.69**	(.85)
Mean	1.87	3.67	3.92	3.76	3.89	3.87	3.67	3.72	3.90	3.70	3.69
SD	.71	.68	.70	.62	.63	.65	.62	.65	.58	.62	.73
$\alpha$	-	.87	.90	.89	.85	.93	.91	.81	.91	.83	.91
CR	-	.88	.91	.89	.90	.93	.91	.81	.91	.83	.91
AVE	-	.55	.66	.58	.65	.70	.60	.60	.66	.50	.72

Notes: \*\*\*  $p < 0.001$ . Diagonal (italic) elements are square roots of the AVE; note that AVE is not applicable for single-item measures.

## Results and Analysis

In order to understand whether institutional resource and social capital were predictors of institutional performance, SEM was conducted. In Figure 1, the main results of the structural model are summarized, including the corresponding standardized path coefficients. Path analysis attested that the standardized path coefficient of institutional slack for teaching ( $\beta = 0.239$ ,  $p < 0.001$ ), service ( $\beta = 0.342$ ,  $p < 0.001$ ), and research outcomes ( $\beta = 0.246$ ,  $p < 0.001$ ) reached statistical significance. Similarly, the standardized path coefficient of reputation in teaching ( $\beta = 0.072$ ,  $p < 0.05$ ), service ( $\beta = 0.080$ ,  $p < 0.01$ ), and research outcomes ( $\beta = 0.102$ ,  $p < 0.01$ ) also attained statistical significance. The standardized path coefficient of internal social capital for teaching ( $\beta = 0.468$ ,  $p < 0.001$ ), service ( $\beta = 0.332$ ,  $p < 0.001$ ), and research outcomes ( $\beta = 0.309$ ,  $p < 0.001$ ) reached statistical significance. Finally, external social capital

had a significant effect on teaching ( $\beta=0.129$ ,  $p<0.01$ ), service ( $\beta=0.255$ ,  $p<0.001$ ), and research outcomes ( $\beta=0.125$ ,  $p<0.05$ ).



**Figure 1:** Structural model with standardized coefficients

In order to explore whether there were significant differences in institutional slack, reputation, and internal and external social capital based on the size and geographical region of HEIs, a one-way analysis of variance (ANOVA) was conducted. According to the ANOVA results provided in Table 2, there is a significant difference between at least two groups for institutional slack [ $F(2, 923) = 21.763$ ,  $p<0.001$ ], reputation [ $F(2, 923) = 69.860$ ,  $p<0.001$ ], and internal [ $F(2, 923) = 26.345$ ,  $p<0.001$ ] and external social capital [ $F(2, 923) = 18.426$ ,  $p<0.001$ ] based on the size of the HEIs. According to multiple comparison tests (Fisher's Least Significant Difference, (LSD)) conducted to understand which groups exhibit significant differences, institutional slack, reputation, and internal and external social capital were found to vary for small, medium, and large-sized HEIs. The mean value for medium-sized HEIs is significantly higher than those of the other HEIs in all three fields.

According to the ANOVA results outlined in Table 3, there is a significant difference between at least two groups for institutional slack [ $F(2, 923) = 19.538$ ,  $p<0.001$ ], reputation [ $F(2, 923) = 16.639$ ,  $p<0.001$ ], and internal [ $F(2, 923) = 12.984$ ,  $p<0.001$ ] and external social capital [ $F(2, 923) = 9.489$ ,  $p<0.001$ ] based on the geographical region of the HEIs. As a result of multiple comparison tests (LSD) conducted to understand which groups exhibit significant differences, institutional slack, reputation, and internal and external social capital differ for northern, central, and southern HEIs. The mean value for central HEIs is significantly higher than those of the other HEIs in all three fields.

**Table 2:** ANOVA results for independent variables based on sizes of HEIs

Variables	Size	N	M	SD	F	LSD
Institutional	1-Large	301	3.47	0.70	21.763***	2-1***
Slack	2-Medium	443	3.79	0.67		3-1***
	3-Small	182	3.72	0.59		
Reputation	1-Large	301	3.57	0.73	69.860***	2-1***
	2-Medium	443	4.15	0.62		2-3***
	3-Small	182	3.94	0.59		3-1***
Internal Social Capital	1-Large	301	3.64	0.60	26.345***	2-1***
	2-Medium	443	3.92	0.57		3-1***
	3-Small	182	3.97	0.53		
External Social Capital	1-Large	301	3.52	0.57	18.426***	2-1***
	2-Medium	443	3.77	0.59		3-1***
	3-Small	182	3.73	0.52		

Notes: \*\*\*  $p < .001$ .

**Table 3:** ANOVA results for independent variables based on regions of HEIs

Variables	Location	N	M	SD	F	LSD
Institutional	1-Northern	588	3.58	0.68	19.538***	2-1***
Slack	2-Central	209	3.91	0.61		2-3***
	3-Southern	129	3.71	0.66		3-1***
Reputation	1-Northern	588	3.84	0.72	16.639***	2-1***
	2-Central	209	4.16	0.63		2-3***
	3-Southern	129	3.91	0.60		
Internal Social Capital	1-Northern	588	3.79	0.60	12.984***	2-1***
	2-Central	209	4.02	0.56		2-3***
	3-Southern	129	3.77	0.53		
External Social	1-Northern	588	3.65	0.57	9.489***	2-1***
	2-Central	209	3.83	0.56		2-3***

Capital	3-Southern	129	3.57	0.63
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Notes: \*\*\*  $p < .001$ .

## Discussion

This paper demonstrates that influential factors affect the performance of HEIs in Taiwan from a social capital and RBV perspective. Based on social capital theory, this study theorizes that internal and external social capital play important roles in predicting HEI performance in Taiwan. The research result is similar to that of Kharouf et al. (2014); Taiwanese HEIs shall not only stress successful relationship building and maintaining with students, but also strengthen internal bonding among members which have forced HEIs to focus on value-added activities to enhance the teaching, service, and research outcomes. Namely, the communications and interactions that the internal members of HEIs engage in to maintain mutual benefit and trust will enhance the internal working efficiency and learning effect of HEIs, which will facilitate HEIs to understand students' learning needs so that they can provide better teaching strategies and establish a more attractive enrollment policy.

This study also finds that social capital is the most non-substituted resource in Taiwanese HEIs. There is a strong indication that while HEIs fight for available resources, they shall first develop good social capital, especially internal one. In other words, when there are strong regulations, visions and values among internal members, it could promote HEIs resource to be applied and distributed with higher cost efficiency, thereby improving HEIs in running efficiency.

Based on the RBV, this study proposes that institutional slack and reputation help enhance institutional performance. With more institutional slack, which is likely to be made up of valuable, unique, and hard-to-imitate resources, HEIs can support strategic behaviors to create a dynamic fit with the competitive educational environment, and further raise their performance. Reputation also plays a crucial role in the effort to understand why some HEIs outperform others; it is an intangible resource that has financial consequences with respect to creating value. Moreover, this study has explored the impact of slack on HEI performance in two ways. First, research findings are similar to those found by Tan and Peng (2003). As there are significant differences between different types of firms, our study fills a necessary gap in testing the impact of institutional slack on performance in the context of recent higher education. Second, we find that the RBV is useful for identifying the relationship between institutional resources and performance. This theory suggests that the amount of resources available to HEIs influences their strategic behaviors, such as their use of institutional slack and accumulation of reputation (Su et al., 2009).

Based on current education context, although funds obtained from government aid programs are deemed an important type of slack. From the perspective of resource dependence, if HEIs overly depend on government aid, it will intensify government interference on HEIs, and reduce their autonomy in budget allocation and academic development. Therefore, it is suggested by this research that HEIs shall reduce their dependence on government funding, and expand resource access through academic alliance; that is to say, HEIs shall share resources between each other to create synergy. At the same time, by checking and reviewing internal operation conditions, HEIs can promote resource utilization.

As to the size of HEIs, a significant difference was detected for institutional slack, reputation, and internal and external social capital. For each field, small and especially medium-sized HEIs have more positive perceptions than large-sized ones. Due to the smaller population of students and the specific organizational hierarchy of medium-sized HEIs, their faculties have more opportunities to communicate and interact with each other, which may facilitate social relationships among them and make them more willing to share information, knowledge, and beliefs with others. In addition, in terms of institutional resources, the perceptions of the faculties in small and medium-sized HEIs are more sensitive than those of faculties at large ones, and this result is closely related to the setting of benchmarks in HEIs.

In light of the regions in which the HEIs are located, a significant difference was detected between both central and southern HEIs and northern HEIs for institutional slack, and between central HEIs and both southern and northern HEIs for reputation, and internal and external social capital. This is in line with Kale (2013), who argued that it is important to consider the geographic location of HEIs when conducting institutional research. The results suggest that perceptions of institutional slack are changing in a positive manner when HEIs are considered from northern to central and southern. While moving from northern to central region, perceptions of reputation, internal and external social capital increase.

In Taiwan, HEIs are not distributed evenly across each district, and the industry development in each region is taken into consideration when establishing HEIs. The institutional mechanism of university-industry linkage provides great incentives and opportunities for commercialization, and increases the likelihood of HEIs obtaining external funding. In northern Taiwan, Taipei and Hsinchu, the two most metropolitan areas in Taiwan, host the most concentrated high-tech industrial parks (Mathews & Hu, 2007); thus half of the HEIs have been established in the northern region. Accordingly, problems concerning resource allocation have arisen.

The intensity of HEIs and the industry development of each region have become the key causes of institutional slack, which requires active partnership and financial support from industry and funding agencies in order to overcome the lack of resources (O'Shea et al., 2005). Moreover, due to the great homogeneity related to the size and development level of Taiwanese HEIs that face lower competition, the degree of competition in the education market in the central region is relatively lower than that of the northern and southern regions. Therefore, faculties in the central HEIs have higher and more positive perceptions – not only towards reputation, but also towards internal and external social capital – compared to faculties in other regions.

Although different countries have differences in city development and establishment of educational institutions, most are centered on major cities. Thus, it is suggested that for the institutional development, each HEI shall take industrial development trend and characteristics of its location into account, and take it as an important direction to the thinking on how to establish its own features and advantages. As a result, even facing the effects on low fertility, HEIs can still enhance students' attending willingness as well as school-running efficiency.

In short, the main findings of this study are that the effects of social capital and institutional resources on institutional performance and measurement variables vary according to institutional sizes and geographical regions. Specifically, these effects were found to be maximized in the medium-size HEIs and in central region. Although the

distinctions between different-sized HEIs and between different regions have become rather blurred, the findings have theoretical and practical implications. From a theoretical standpoint, they suggest that researchers should pay more attention to institutional features as moderating variables when they conceptualize antecedents' influences on institutional performance. From practical perspective, the findings can be used to support Taiwan and other countries with similar educational structure in dealing with government's funding decisions in relation to the aid programs, as our data indicate that institutional resources and social capital are more effectively encouraged in central HEIs because these HEIs are in much more stable competitive condition and homogeneity.

## Limitations

Although the findings are significant for both institutional and educational research, there are three primary limitations. Firstly, this study only uses cross-sectional resources, and may not be generalizable to the viewpoints of dynamic relationship development. Thus, future studies can focus on the co-evolution of social capital development stages and institutional performance. Secondly, the results are context-specific for Taiwan, and caution should be used when generalizing them to other countries.

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# HEIs Faculty's Job Satisfaction and Intention to Leave in East Asia

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## Abstract

The research investigates correlation between institution and faculty on intention to leave current academia among faculty members in Southeast Asia. Job satisfaction is adopted as a mediator of intention to leave academic position. Using binary logistic regression analysis to gain empirical evidence, the study explores how academic job satisfaction and institutional characteristic variables may affect the decision of intention to leave academia. Drawing on data from Asian countries' HEIs faculty who participated in the 2012 Academic Profession Survey, dataset comprises of 3,562 HEIs' faculty members from Cambodia, Malaysia, Singapore, Vietnam, Taiwan and Japan. In the study, academic job satisfaction was assessed as mediators of the relationship between institutional characteristic intention to leave academia following criteria developed by Baron and Kenny and Holmbeck. The results reveal that institutional characteristics including academic support, intellectual climate and academic preference are significantly related to intention to leave and academic job satisfaction. Institutional characteristics continued to have significant relationships to intention to leave after mediator was entered, but their contribution was lower than before. Academic job satisfaction was consistently a mediator. An exception to this result is that teaching-oriented faculty group is not statistically significant. These results have important implications that teaching-oriented faculty tend to ignore to engage in research. In conclusion, Asian countries should develop multiple pathways of promotion to balance the engagement of research and teaching of HEIs faculty.

**Keywords:** Academic Profession, Academic Engagement, Knowledge Society, Job Satisfaction, Multiple Pathways of Promotion

## Introduction

According to Martin Trow (2005), indicating that the development of higher education has a transition from Elite to Mass to Universal Type, this means the international higher education has dramatically expanded recently. The academic profession becomes more important in the knowledge society and HEIs faculty involved in 'knowledge-intensive' activities take the responsibility to equip themselves with the skills and attitudes to help them generate the knowledge. In practice, Boyer (1990) proposed a fourfold division of academic work into what he labelled the scholarship of discovery; the scholarship of application; the scholarship of integration; and, finally, the scholarship of teaching. As a result, academics are emerging as a key source of innovation of knowledge. In addition, across a wide range of studies, academic job satisfaction(AJS) is as important predictors of disengagement and intention to leave an academic position (Seifert and Umbach, 2008). Academics' perceptions of work life influence the level of AJS, and that in turn, contributes to faculty intentions to leave (Johnsrud and Rosser, 2002). The purpose of this research is to investigate correlation between institution and faculty on intention to leave current academia among faculty members in Southeast Asia. Job satisfaction is adopted as a mediator of intention to leave academic position. Also, we adopted Hagedorn's (2000) conceptual framework for AJS.

## Academic Job Satisfaction (AJS)

### Theoretical Framework

Hagedorn (2000) offered table 1, Conceptual Framework of Faculty Job Satisfaction, as a strategy to sort and categorize the factors that compose and contribute to job satisfaction. This framework is built on Herzberg and his colleagues (1993), dividing job satisfaction into two sources, namely motivators/ intrinsic factors and hygienes/ extrinsic factors. Motivators work to increase satisfaction while other factors labeled hygienes decrease dissatisfaction or result in demotivation.

Revising Herzberg's two-factor theory, Hagedorn hypothesizes two types of constructs that interact and affect job satisfaction—mediators and triggers. The model includes three types of mediators: (1) motivators and hygienes, (2) demographics, and (3) environmental conditions. The mediators and triggers form an elementary structure and framework in which faculty job satisfaction may be examined.

It provides a framework for the study to explore how academic preference and institutional characteristic variables may affect the decision of intention to leave academia when AJS is as a mediator. Moreover, academic preference contains (a) research- orientated, (b) both, prefer to research, (c) both, prefer to teaching, (d) teaching-oriented. Also, working infrastructure and institutional climate are viewed as institutional characteristic variables.

### Academics' Job Satisfaction and Related Variables

Academics' preference for teaching or research

In the processes of academic area, research and teaching are the most important vehicles. In fact, in universities, where a research orientation as well as the teaching orientation exist together, these two functions had the potential for generating conflicts, so the search for their intentional and systematic nexus became inevitable.

It is widely assumed in research on the academic profession that the academics' views as regards the desirable relationships between teaching and research play a powerful role in shaping the actual activities in those domains. Therefore, academics have been asked in the CAP study about their preference as regards teaching and research: whether their interests lie (a) 'primarily in teaching', (b) 'in both, but leaning towards teaching', (c) 'in both, but leaning towards research' and (d) 'primarily in research' (Teichler, U. et al., 2013b). Azman et al.'s (2013) study which is based on Malaysian data found that academics who preferred teaching indicated a high level of satisfaction (67.0%) with their current job, while 66.9% of academics whose preference was in both but leaned towards teaching responded either very satisfied or satisfied overall with their job. Perceived level of satisfaction was lowest among those who were primarily involved in research (52.9%), while academics who preferred both but leaned towards research (64.7%) responded that they were either very highly satisfied or highly satisfied overall with their job.

**Table 1:** Conceptual Framework of Faculty Job Satisfaction

mediators			Triggers
Motivators and hygienes	demographics	Environmental conditions	Change or transfer
1.Achievement	1.Gender <sup>a</sup>	1.Collegial	1.Change in life stage
2.Recognition	2.Ethnicity <sup>a</sup>	relationships	2.Chang in family-related or

	mediators		Triggers
Motivators and hygienes	demographics	Environmental conditions	Change or transfer
3.Work itself	3.Institutional type	2.Student quality or	personal circumstances <sup>a</sup>
4.Responsibility	4.Academic	relationships	3.Change in rank or tenure
5.Advancement	discipline	3.Administration	4.Transfer to new institution
6.Salary <sup>a</sup>	5.Academic	4.Institutional climate	5.Change in perceived justice <sup>a</sup>
7.Working infrastructure <sup>b</sup>	preference <sup>b</sup>	or culture	6.Change in mood or emotional state <sup>a</sup>

<sup>a</sup>measures not operationalized

<sup>b</sup>additional variable, not included in Hagedorn's (2000) original work

### Institutional characteristics

It is generally assumed that the quality of facilities and resources for teaching and research can be a key factor for job satisfaction (Azman et al., 2013; Schreyer, I., & Krause, M., 2016). When the work conditions were better than they are currently, academics' job satisfaction might be mainly related to motivators; however, work conditions became critical factors as well as motivators in determining job satisfaction in the current work environment where work conditions such as salary and rewards deteriorated compared to other jobs as discussed by Bryson (2004) and Parker & Jary (1995). Azman et al. (2013) concluded that generally, classroom and computing facilities were rated as good/excellent by a higher proportion of respondents whose primary interest was in research than by those whose interest was in teaching. However, a lower percentage of faculty whose primary interest was in research reported satisfaction with office space (36.5%) as compared to those whose preference was for teaching (50%). In terms of secretarial support, the lowest percentage for excellent or good ratings was given by academics whose preference was mainly in research (9.1%).

In addition, it argued that supervisory support, job security, training and development opportunities, team cohesion, career growth, working conditions, and organizational culture and policies are positively associated with the academics' job satisfaction (Masum, A. M. et al., 2015). In the aspect of intellectual climate, organizational culture have the greatest influence on teacher job satisfaction. For example, Stearns, E., et al. (2015) find that professional community, collaboration, and teacher control are predictive of satisfaction and they also have interactive influences. The association between teacher collaboration and job satisfaction, as well as that between control over classroom policy and job satisfaction, is most obvious in schools.

### Job Satisfaction and Intention to Leave

Like most of life's expressions and emotional responses, job satisfaction is better represented by a continuum than by discrete categories. However, for purposes of conceptualization, Hagedorn (2000) has identified three points on the continuum and have supplied the labels of (1) appreciation, (2) acceptance or tolerance, and (3) disengagement. Hence, a faculty who has high level of job satisfaction would like to appreciate his or her position and then result in job engagement and productivity. On the other hand, faculty with low level of job satisfaction will not actively engage themselves in work and have the possibility to leave the job.

Although actual turnover is difficult to approach, previous study (Ryan et al., 2012; Johnsrud and Rosser, 2002; Padilla-Gonzalez & Galaz-Fontes, 2015) have shown that the

intention to leave a position is an adequate proxy indicator for actual turnover. In the result of their study, key predictors for faculty having considered leaving academe altogether were being in a “hard-applied” discipline, not having a spouse or partner, a perceived lack of support, a perceived lack of fit, stress of raising a family, and dissatisfaction with certain aspects of the “faculty job” (Ryan et al., 2012). Johnsrud and Rosser (2002) also organized that early turnover studies focused on the motives of individuals within organizations and their decisions to leave. Thus, according previous studies, apart from individual experiences, organization considers job satisfaction as an intermediate variable in the case of higher education. Understanding and predicting faculty intention to leave is important to the development of improved conceptual frameworks of faculty success as well as the implementation of effective retention strategies for academic leaders and institutions invest considerable resources in recruitment, institutional support, and compensation (Ryan et al., 2012).

To sum up, due to academic profession requiring long periods of training and practice, it is crucial to improve faculty’s job satisfaction. Therefore, they will not leave the position and high quality faculty members came out.

## Data

The data for this study came from the Academic Profession in Asia (APA) project where 6,034 HEIs’ faculty members are from 6 countries including Cambodia, Malaysia, Singapore, Vietnam, Taiwan and Japan.

**Table 1:** Considering AJS by country

Country	N	Academic job satisfaction	
		Mean	Standard deviation
Cambodia	513	3.4002	.71164
Malaysia	657	3.5700	.68866
Singapore	164	3.7329	.79654
Vietnam	786	3.8357	.80376
Taiwan	408	3.4810	.83856
Japan	1034	3.3051	.73735
<b>Total</b>	<b>3562</b>	3.5222	.78045

## Methodology

We assumed AJS was a key variable related to our research. We use table 2 to develop a summative index of AJS. The APA Survey identified job satisfaction with a continuum item, using a five point Likert scale: “How would you rate your overall satisfaction with your current job?” (B6). This item is used to estimate the overall AJS. In addition, two more items were included, which asked about the level of agreement with the assertions: “If I had to do it over again, I would not become an academic” (B5\_5), and “My job is a source of considerable personal strain” (B5\_6). Pertinent changes were made in the coding of the variables in order to have larger values associated with higher AJS. And other factors associated with job satisfaction were examined through linear and binary logistic regression. The independent variables contained discrete variable and continuum variables, some of which were transformed into dummy variables (e.g. academic preference). Bivariate relationships with job

satisfaction were examined with Pearson correlation coefficient, and all independent variables were included in the regression calculations.

Afterwards, multiple logistic regression analysis treated the dependent variable. The dependent variable was then transformed into a binary variable for binary logistic regression to aim at the analysis of a dichotomous outcome. The reason for this was to test whether the same independent variables associated with higher levels of overall job satisfaction predicted the likelihood of intention to leave.

### **Consideration of Intention to leave academia and Academic Job Satisfaction (AJS)**

To examine the potential of considering intention to leave academia, several domains of the work environment should be evaluated homogenously. Thus, this study adopts 5 items relation to their potential considering intention to leave academia including income, resources of research, academic collaboration, and workload of research and teaching. A four-item composite scale was based on the improvement in reliability that comes from measuring intention to leave academia as a multifaceted construct. The factor-based scores were transformed into a binary variable for ‘stay’ (intention to leave academia index greater than 3) or ‘leave’ (intention to leave academia index of 3 or less).

### **Independent Variables**

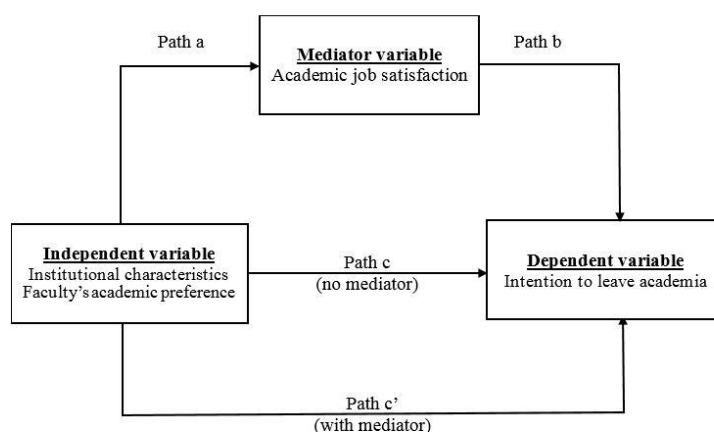
The independent variables were classified according to the Hagedorn’s (2000) framework into four categories: motivators and hygienes, demographics, environmental and triggers. The variables that were included in the analysis are presented in Table 2. This model takes academics’ personal characteristics, namely academic preference, into account. The organizational environment is explored through the academics’ perception of academic infrastructure from their higher education institution, the communication and intellectual climate.

**Table 2:** Variables in the model used to explore academic’s consideration of intention to leave academia

Category	Variables included
<b>Institution aspect</b>	
<b>Institutional characteristics</b>	Working infrastructure
	Communication
	Intellectual climate
<b>Faculty aspect</b>	
<b>preference</b>	1.research- orientated
	2.both, prefer to research
	3.both, prefer to teaching
	4.teaching-oriented
<b>Mediator</b>	
<b>Academic job satisfaction</b>	Academic job satisfaction
<b>Dependent variable</b>	
<b>Intention to leave academia</b>	Intention to leave academia

## Analysis and results

### Academic job satisfaction as mediator



Note: Path c' represents the contribution of education to health after the contribution of the mediator (Path b) to health is controlled by entering both education and the mediator in the same step in the same equation.

**Figure 1:** Required paths for demonstrating mediation effects

According to Baron and Kenny (1986), the four conditions for determining the presence of mediation effects were examined in this study using the following four series of hierarchical multiple regression analysis (a) The first series of regressions establishes the relationship of institutional characteristics and academic preference between AJS, or Path a; (b) the second regression series establishes that the mediators are related to intention to leave academia, Path b; (c) the third regression series establishes the relationship of institutional characteristics to intention to leave academia, Path c; and (d) the fourth set of regressions includes the simultaneous entry (as recommended by Baron and Kenny) of institutional characteristics and the presumed mediator as predictors of intention to leave academia, Path c'.

#### Mediation analysis

Institutional characteristics and academic preference to presumed mediators: Path a. For the first series of regressions, Table 3 summarizes the analysis in which each presumed mediator is the dependent variable. Institutional characteristic except communication was significantly related to AJS. And academic preference is also significantly related to AJS. Thus, the first condition required for mediation effects was met.

Presumed mediators as predictors of intention to leave: Path b. The dependent variable was then transformed into a binary variable, so multiple logistic regression analysis treated as analysis. Table 4 represents the findings for the relationship of the presumed mediators to the health measures. AJS as mediator was significantly related to intention to leave. Thus, the second condition for mediation was met for mediator variables.

Institutional characteristics and academic preference to intention to leave: Path c. For the third series of regressions, Table 5 represents the analysis in which intention to leave is regressed on institutional characteristics and academic preference after the demographic

controls had been entered. Institutional characteristics except working infrastructure was significantly related to intention to leave. Also, academic preference was significantly related to intention to leave. Thus, the third condition required for mediation effects was met.

Comparison of effects before and after entry of mediators: Path c vs. Path c'.

In the fourth series of regressions, with intention to leave as a dependent variable, institutional characteristics, academic preference and presumed mediator were entered simultaneously at the same step to establish the contribution of institutional characteristics and academic preference with the effect of the presumed mediator accounted for. Table 6 shows the comparison between the standardized  $\beta$  for institutional characteristics and academic preference before the presumed mediator had been entered (Table 6) and the standardized  $\beta$  for institutional characteristics and academic preference after the presumed mediator had been entered. Institutional characteristics except working infrastructure and academic preference continued to be significantly related to each of intention to leave after the presumed mediators was in the regression equation, and thus the presumed variables is not qualified as mediators according to the Baron and Kenny (1986) criteria.

Although all independent variables except working infrastructure remain significant, the significant reduction in the contribution of independent variable by a mediator was for academic preference in teaching and research. There were significant differences between the academic preference  $\beta$  before mediator was entered (Path c) and the  $\beta$  after mediator was entered (Path c') on intention to leave. The academic preference  $\beta$  was lower after each of the presumed mediators were controlled, so the variables qualified as mediators according to Holmbeck's (1997) criteria.

**Table 3:** Relationship of independent variable Institutional characteristics and academic preference to presumed mediators(Path a)

Dependent Variable:	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Academic job satisfaction	B	Std. Error	Beta		
(Constant)	2.476	.080		31.093	.000
research- orientated	.226	.065	.094	3.496	.000
both, prefer to research	.237	.055	.147	4.295	.000
both, prefer to teaching	.129	.054	.082	2.373	.018
Working infrastructure	.101	.027	.100	3.793	.000
Communication	.045	.026	.049	1.775	.076
Intellectual climate	.116	.020	.137	5.928	.000

**Table 4:** Relationship of presumed mediators to intention to leave (Path b)

Mediator	B	S.E.	Wald	df	Sig.	Exp(B)
Academic job satisfaction	-.344	.053	42.101	1	.000	.709
Constant	.616	.187	10.881	1	.001	1.852

**Table 5:** Relationship of independent variable institutional characteristics and academic preference to intention to leave (Path c)

Dependent Variable:	B	S.E.	Wald	df	Sig.	Exp(B)
intention to leave						
both, prefer to teaching	-.577	.158	13.436	1	.000	.561
both, prefer to research	-1.243	.166	56.370	1	.000	.289
research- orientated	-1.378	.203	46.270	1	.000	.252
Working infrastructure	.131	.085	2.401	1	.121	1.140
Communication	-.199	.080	6.182	1	.013	.820
Intellectual climate	-.267	.062	18.598	1	.000	.766
Constant	1.242	.247	25.263	1	.000	3.462

**Table 6:** Comparison of standardized  $\beta$  for institutional characteristics and academic preference before and after each presumed mediator was entered on intention to leave (Path c')

		academic preference				Institutional characteristics		
		both, prefer to teaching	both, prefer to research	research- orientated	Constant	Working infrastructure	Communication	Intellectual climate
Before	B	-.577	-1.243	-1.378	1.242	.131	-.199	-.267
Mediator Entered	Sig.	.000	.000	.000	.000	.121	.013	.000
After	B	-.585	-1.415	-1.241	1.811	.144	-.175	-.236
Mediator Entered	Sig.	.000	.000	.000	.000	.096	.031	.000

## Conclusions and discussion

This study uses Hagedorn (2000)'s framework to investigate the relationship between institution and faculty on intention to leave current academia among faculty members in Asia. Consistent with previous research (Padilla-González L., & Galaz-Fontes J. F., 2015, Ryan et al., 2012; Johnsrud and Rosser, 2002), our findings underscore AJS as a mediator. Whether the candidate variables should be considered as mediators depends on whether one adopts the more stringent criteria of Baron and Kenny (1986), or the more liberal criteria of Holmbeck (1997). Moreover, we know that AJS is related to the intrinsic preference of teaching and research (Teichler, U. et al., 2013b, Azman et al., 2013), and taking that into consideration, the results of this study highlight the importance, though indirectly, of policies regarding recruitment and promotion among institutions.

The results suggest that AJS is a mediator variable to explain the intention to leave the academia. From the mediation analysis, though results of the study point organizational variables that remain significantly related to intention to leave when included AJS, according to both criteria, from table 6 we can observe the reduction of  $\beta$  value, it is contended that they are central in explaining AJS, which in turn is related to leaving academia. Therefore, the results suggest the study confirms that AJS has mediating effect through institutional characteristics and academic preference to intention to leave academia. However, both

variables of institutional characteristics and the variable of working infrastructure don't significantly related to intention to leave before and after mediator variable entered. In this study, we know that working infrastructure has no effect both on AJS and intention to leave among countries, so it needs more studies and analysis on these matters. Also, there is a need to clarify the meaning of the pertinent labor context in relation to AJS as well as the cultural context. From the pertinent labor context related AJS, there is often-cited paradox that academics may be highly critical of various aspects of their jobs but still report being satisfied overall. Unlike other organizations, where job satisfaction may be reflected through absenteeism or staff turnover as dissatisfied workers move to better alternatives, universities offer unique and rewarding careers, where given their time over, most academics would still stay in academia.

Also, it is difficult to devise a reliable, multi-item composite measure of AJS which is internationally consistent because cultural differences influence the degree of satisfaction from different elements of academic work and the environment. For example, job-related strain and self-reported job satisfaction may differ from one to the other. Moreover, perceptions of administrative processes and their relationships with job satisfaction also differ. Although the diversity in AJS and its correlates may be an accurate reflection of cross-national and intercultural differences, there are inevitable problems of measurement error associated with the translation of terms, such as "cumbersome administrative processes."

Intention to leave the academia is an important and complex decision (Seifert & Umbach, 2008 and Johnsrud & Rosser, 2002). The result shows clearly that while specific factors of the work environment affect AJS, AJS might constitute a sort of coordinating variable affected by a variety of institutional factors. In turn, AJS has impacts on intention to leave the academia. From the mediator analysis, we confirmed that AJS has partially mediating effect on intention to leave, but we need more studies, which can enrich both theoretical framework as well as empirical data to deeply understand the phenomenon of faculty' academic profession. Particularly, if we can understand the specific conditions of faculty intention to leave academia, it gives us inspiration of the expectation of faculty's academic career.

In our study, we recognize "intention to leave" is different from "actual departure." AJS is complex and manifests itself in various ways. Attitudes towards university policies and administration may be symptoms of satisfaction, not the cause. The potential relationship from intention to leave to actual turnover calls for reflexing on effective retention strategies that can compensate for the investment that higher education institutions make in their faculty. Future studies should consider using actual departure to indicate the action taken as an outcome.

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# **Analysis of the School Resource Generation of De La Salle University-Dasmariñas: Basis for a Proposed Resource Generation Program**

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## **Abstract**

The study aims to assess the school resources generation of both De La Salle University Dasmariñas for a proposed school resource generation program. The main sources of data came from the interview conducted with the Vice Chancellor of Mission, External Affairs and Advancement of the De La Salle University- Dasmariñas (DLSU-D). Findings from the study showed that De La Salle University-Dasmariñas is more efficient in terms of generation of its school resources. This is attributable to the expertise of the Vice Chancellor of DLSU-D in handling its school resource generation particularly on the way her Office reaches out to its alumni and the entire La Sallian community for any form of commitment and support towards any school undertaking. On the other hand, this study also showed the inadequate policies of some universities in Cavite in terms of its school resource generation program. This has been evidenced by the absence of a particular office which will oversee the concerns on school resource generation due to their dependence on the school's tuition fee earnings and other contingency funds. Based on these findings, there is a need to develop a School Resource Generation Program that will help improve these other local universities based on the tested and proven learnings and experiences of De La Salle University-Dasmariñas as well as the entire community's perception on school resource generation.

**Keywords:** School Resources Generation, Office of the Vice-Chancellor for Mission, External Affairs and Advancement, De La Salle University Dasmariñas

## **Introduction**

For the past years, the demand for quality education for all has geometrically increased. The demand for quality education has ballooned making the task vast and enormous. Budgetary constraints and limited resources were roadblocks which have to be hurdled. As a consequence, schools have experienced shortages in teachers, classrooms, textbooks, desks and latest learning facilities.

As the school and government cannot carry the whole burden of education, efforts are made in line with sharing the governance in the enhancement of the educational system. This is where the concept of resource generation comes into play.

The generation of resources is a central issue for the sustainability of schools. We all know that we do not live in a perfect world. However, we cannot deny the fact that all children wherever they live and no matter what economic condition they belong to, deserve

a high quality education. Yet, in many developing countries, their governments are obviously not capable of shouldering the entire cost of education for all.

But the good news is that there is a solution to address this problem. A school has the capacity to generate income or resources in order to provide education and its amenities and other services to those who want it or are interested to avail of it without relying so much on government support or charging additional student fees.

So where will the school derive its additional funds if we are to exclude funds coming from student fees and government support? This is where the idea of resource generation comes into the picture. The aim of any school should be to deliver the best possible education to its stakeholders – the students. And this objective cannot be realized if the school owners and its administrators will mainly depend on existing school funds coming from tuition fees and government support.

For this reason, De La Salle University- Dasmariñas, Office of the Vice Chancellor for Mission, External Affairs and Advancement provided insights on the challenges, opportunities and threats. In line with this, the researchers of this study decided to conduct an interview with the Vice Chancellor for Mission, External Affairs and Advancement in order to find out the various challenges, opportunities and threats that their offices are facing when it comes to resource generation and the many ways on how they were able to confront and deal with these challenges. The learning experiences and the results of this study will be a basis for the proposal of a school generation program for other colleges and universities in Cavite as well.

## **Statement of the Problem**

The major purpose of the study is to analyze the management of the school resources generation of De La Salle University- Dasmariñas in order to come up with a proposed school resources generation program.

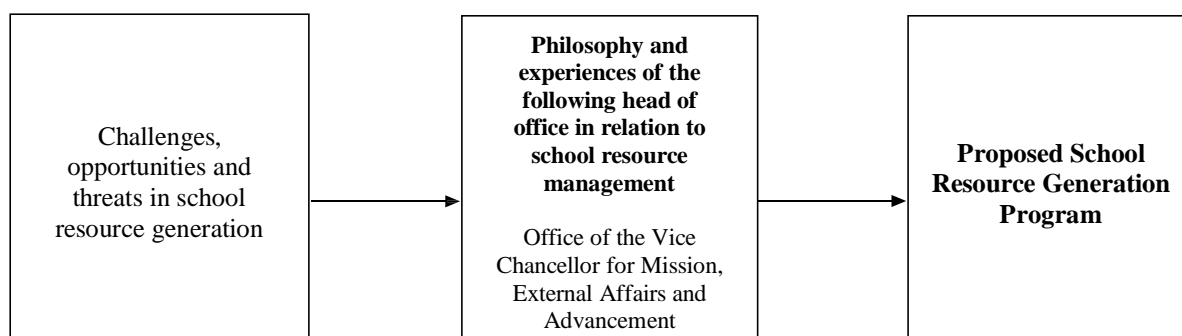
Specifically, the study sought to answer the following questions:

1. What is the function of the Office of the Vice-Chancellor of Mission, External Affairs and Advancement of the De La Salle University- Dasmariñas in terms of its school resource generation?
2. What are the challenges, opportunities and threats that are faced by the said university in relation to its school resource generation?
3. What are the guidelines and policies that will serve as basis for a proposed school resource generation program that will be beneficial to the other colleges and universities in Cavite?

## **Paradigm of the Study**

The analysis of the school resources generation program of the De La Salle University- Dasmariñas helped the researchers of this study to come up with an effective school resources generation program. This will benefit the academic community in the fulfillment of their ultimate objective which is education for all. The research also paved the way for the new definition of school resource generation which is not merely “fund raising”

but “friend raising” as pointed out by the Vice Chancellor of De La Salle University-Dasmariñas.



## Paradigm of the Study

This study utilized the descriptive method of research to assess the resource generation program of De La Salle University- Dasmariñas to benefit not only DLSU-D but other colleges and universities in the province of Cavite for a proposed resource generation program. The respondents of this study is the Vice-Chancellor of Mission, External Affairs and Advancement of the DLSU-D. The purpose of this study is to come up with a proposed resource generation program to help universities and colleges in developing policies and guidelines. In gathering data and information, the researchers prepared questions and conducted an interview to determine the existing policies and guidelines related to school resource generation of the respondent school.

The interview questions was based on the statement of the problem and answered based on the perception and experiences of the Vice Chancellor for Mission and External Affairs Advancement. The respondents clearly answer the questions which gave the researchers the idea on how school resource generation are should be done and its importance to the institution.

## Analysis and Interpretation

From the interview of the researchers to the respondents, the questions were answered and interpreted.

Problem 1. What is the function of the Office of the Vice-Chancellor for Mission, External Affairs and Advancement of the De La Salle University- Dasmariñas in terms of its school resource generation?

The respondent, Vice Chancellor of DLSU-D identified the functions of the Office by defining what resource management is. According to the respondent “resource management is resource generation.”

This involves sourcing of funds from outside especially from the stakeholders. The stakeholders pertain to friends, benefactors, sponsors, and other friends of the university. Even the local government unit and other non-governmental institutions are considered stakeholders. It is also important according to the Vice-Chancellor that an institutional office should be put up in order to manage the concerns of school resource generation. This would

clearly explain why a University Advancement office, formerly the University Development Office, was established. The word “advancement” has been the new term for development because there will be a misnomer in terms of development. According to the respondent, development may involve human development, physical development, or financial development but it is more appropriate to use University Advancement instead to keep up with the times.

On the other hand, in other schools, it has been observed that resource generation is not a common activity in their institution. This is due to the beliefs of the people that the institution is a well-off organization and it is very difficult to raise funds from outside the school for fear that they might arise several misconceptions. According to the other schools interviewed, they welcome donations from stakeholders, alumni, and other governmental and non-governmental institutions to support their students in terms of scholarships. They are fully supported by their management and owners and this is why their academic institutions no longer engage in any resource generation activities.

Based on the ideas and views of the respondent, the functions of the Vice-Chancellor for Mission, External Affairs and Advancement of the DLSUD is to support project developments of the institution primarily by identifying local and foreign organizations or individuals who will possibly give or help the institution in its projects and advocacies. They are also responsible in conceptualizing sustainable resource generation activities specifically in formulating policies and guidelines on resource generation. The office also works on identifying priority projects or advancement to be supported on the resource generating activity.

Problem 2. What are the challenges, opportunities and threats that are faced by the two universities in relation to its school resource generation?

According to the VP for Mission, External Affairs and Advancement, everything is a challenge when it comes to resource generation. She have to identify possible donors who will share with her advocacy in advancement and development. To meet possible donors, the respondent has to devote her time and effort in meeting new people. Attending to invitations where she can have the chance to meet people. There is no perfect time and place for resource generation. According to her, even the person seating beside her in a plane can be a possible donor. In this situation, there lies an opportunity to meet new people who can share the same advocacy and help the institution in any way they can help. Money is not all that matters according to her. Even a person who is not capable of giving can be a donor by inviting people they know who can be of help and can be a donor to the institution.

The respondent said that there is no time table except when you are asking for donations but there is a multiplying effect when you make friends with people. The domino effect of relationship will multiply. For example, a person may not give, he have no resources, but he is a donor by telling his relative, friends, etc. to give. Donation is not all material things. Donations can be service it can be time, or referrals.

Resource generation as the researchers understood can be viewed as fundraising, and fundraising is all about opportunities. Recognizing opportunities, discovering opportunities, creating opportunities, developing, seizing and turning ideas into opportunities. It is not altruism that makes people donate to charity. It is the story the organization tells, and how they tell it, that determines the success of most charity fundraising efforts. Raising funds for charity is tough business most of the time (Das, E., Kerkhof, P., & Kuiper, J., 2008).

Problem 3. What are the guidelines and policies that will serve as basis for a proposed school resource generation program that will be beneficial to San Sebastian College Recoletos de Cavite and other colleges and universities?

DLSUD is known to be one of the finest university in the country with large number of students' population.

Even with the idea that the school is for the well-off students, the institution still maintain an office which is headed by the respondent. For her, resource generation is a very helpful strategy to support student scholars and other development plans and advocacies of the institution. The respondent gave a clear answer on what are some of the traits which a person who will perform the job in resource generation should have. The following are some of the traits enumerated and explained which served as basis for generating policies and guidelines in resource generation.

- a. Patience. In this kind of duty, a person can prove that patience is a virtue. Not all people can be a donor. The people involved in resource generation should not expect that a positive result can be expected on the first meeting. If a plan for resource generation fails, find other ways of meeting new people to be a donor.
- b. Credible. The person holding the position on resource generation should be highly credible. Being credible enough for the position can encourage donors to support the office on its advocacy and projects. Donors will expect that every cent they give can be of help and should be properly used.
- c. Transparency. Any amount of donation should be accounted properly and treated equally. According to the respondent, donors should be treated equally. Transparency is the key. Because these donors will keep on giving if they see where the money and the donation goes.
- d. Amiable. Being friends to every donor. Appreciate and recognize them. Treat them fairly.

Being a good sales person or a good marketer may be helpful in fundraising, but there is far more to the career than sales and marketing. The Vice Chancellor of DLSU-D is guided by the following key principles as illustrated by Jerold Planas in his book, *Born to Raise*, on how to become a successful fundraiser: 1) Impeccable integrity, 2) Good listener, 3) Ability to motivate, 4) Hard worker, 5) Concern for people, 6) High expectations, 7) Love the work, 8) High energy, 9) Perseverance, 10) Presence

### **1. Analysis and Interpretation**

Although professional integrity seems to be a quality that one either has or doesn't have, there are things you can do to help develop your personal integrity. First know, understand, and support the AFP Code of Ethics and Standards of Professional Practice. These documents will provide guidelines about what is ethical in the field of fundraising. Adherence to the Donor Bill of Rights is another step in assuring that the organization holds the donor's interests above its own, and that you, the professional, hold the interests of the donor first, the organization second, and yourself last.

If you have a faith system in which you believe, it can be a help in developing your sense of morality and ethics. Every major religious belief holds certain moral principles which can help its members make sound ethical judgments.

You can also enroll in a class in ethics and attend AFP programs on ethics. AFP also has an ethics board that can answer questions about ethical issues. So although integrity might seem to be an inborn quality, it can be developed by understanding ethics, morals and donors' rights.

## **2. Good Listener**

Good listening is definitely a quality that can be learned. A class in communications can help emphasize that listening is the most important part of good communication skills. (There may be a very good reason why human beings were created with one mouth and two ears!)

Active listening is important to good donor relations. Often a major gift can be secured by a solicitor whose listening skills have been honed. Listening for what the donor's interests are is even more important than being able to persuasively explain the organization's case. Practice making "the ask" and truly listening to the donor through role playing with colleagues or by attending courses in making the ask.

## **3. Ability to Motivate**

The ability to motivate donors, volunteers and staff is a critical key for success. Motivating donors goes back to the integrity section. Putting the donor's interest first and foremost will make it easier for you to motivate donors. Motivating donors does not mean persuading donors to do something that they don't want to do or that is not in their best interest. Motivating donors comes through understanding that philanthropy brings joy to the donor and that if the donor really believes in the mission, motivation is simply a tool to bring about the donor's wishes. Learning the case for support and having passion for the mission of the organization for which one works, is the best way to successfully motivate another person to share that passion.

It is also important for you to understand the psychology of philanthropy. There are many motivating factors that prompt an individual to contribute to a nonprofit organization. Each donor will have different motivating factors that influence a decision to give or not give. Listening to the donor is a critical skill which can help you understand how to motivate donors.

Volunteers, likewise, can be motivated only if the volunteers and the fundraising staff share a passion for the mission of the organization. Again, a good course in communication will help you learn how to speak and write with enthusiasm and passion that will motivate others.

Motivating the staff of the organization is also important. This starts with having respect and concern for other staff members. Staff members will be motivated by the good example set by the chief development officer. Involving staff in the development planning process is a good way to motivate them to help implement the plan.

Regular staff meetings that include an educational segment about some facet of fundraising and occasionally a motivational or inspirational guest speaker, in addition to staff updates on current projects, can help motivate staff to greatness.

## **4. Hard Worker**

One thing you need to understand going into this profession is that it is definitely not a 9 to 5 job. Often you may be on the job as early as 7 a.m. meeting with volunteers,

attending breakfast meetings, or just getting into the office early to organize your day before the phone calls and emails start arriving. You may easily be at work at 7 or 9 p.m. attending after-hours events, meeting with volunteers, or working at a phonathon. The key is to work hard, but take good care of yourself at the same time. Eating healthy, getting regular exercise, having a hobby or interests outside of work, and taking a vacation or several mini vacations each year will keep you mentally and physically healthy even though the hours of your job may be demanding.

And, working hard does not mean you need to be “wired in” 24/7. Leave work at work, do not take it home or on vacation unless it is extremely critical. In some cases, it might be better to answer emails while on vacation rather than becoming stressed out by the sheer volume of email waiting at the office on your first day back at work. But, as a true professional be careful to avoid thinking that you are indispensable and that you have to stay connected to the office at all times. You aren’t, and you don’t!

### **5. Concern for People**

Again, this may seem like an innate quality that one either has or doesn’t, but there are some things you can do to cultivate concern. First, working for an organization about which you care deeply is one way that you can feel concern for the organization’s clients. Many professionals gravitate to an organization that may have helped them or a loved one and these individuals will usually be empathetic with the organization’s clients. Another tool that can help is to get out and about within the organization, the old “management by walking around” theory. Talk to the people who use your organization’s services, find out their stories, and talk to them about their hopes and desires for the future. It will make fundraising easier and allow you to speak in a compelling fashion about your organization’s mission and can also help you build empathy and concern.

Concern for people goes beyond caring about the donors and the clients, but extends as well into concern for the staff. Taking time to listen to the concerns of other staff people, your colleagues in the development office and others in the organization, can help the development professional build a concern for people.

### **6. High Expectations**

As a development professional, you should have high expectations not only for yourself, but for your organization and for your coworkers. Often it is the development professional that “leads from the middle” and inspires the organization to greatness. Cultivating donors who have vision is one way to lead the organization to a higher level of performance. Also, some board members can have a great effect on the vision of the organization, so as a development professional, you should have input into the selection of new board members who can help transform the organization into bigger and better things. However, this does not mean setting unrealistic goals or having expectations that are so demanding that the staff gets frustrated.

Expecting the best from the development staff and other staff within the organization is critical as well. Development professionals who have a staff reporting to them should allow the staff members to set their own goals and provide them with the tools to do their job. Having a once-a-year staff retreat for the development office members in addition to regular staff meetings can be a good way to empower staff.

## **7. Love the Work**

Not only do you need to love the organization you work for, you need to love the work of development! Loving this career often starts with volunteering in the area of development. If you do not enjoy volunteer fundraising, you probably won't love it as a career. So if you are thinking about entering the profession, you may want to begin by volunteering to work on a special event, a phonathon, or a corporate appeal for a few nonprofits and see if you really do love fundraising.

As with anything the more knowledgeable you become in an area, the more likely it is you will enjoy doing it. Who can say they love knitting if they don't know how to knit, or cooking if they have never learned how to cook, or skiing if they haven't taken a ski lesson? The same is true with development. You will need to learn as much as you can about the profession by taking classes, reading books, attending workshops. If you find a particular aspect of fundraising that really appeals to you, such as planned giving, major gifts, or grant writing, you should pursue that area. If you prefer being a generalist you should look for a position as a development director in a small shop where you will get to do a variety of fundraising tasks. Finding your niche is critical to loving the work. It also means that if you become frustrated, worn out, or just bored, you may need to think about moving on.

## **8. High Energy**

Having high energy seems like a natural for some people, whereas for others, it may require some work. But energy can be built by following some of the advice mentioned earlier. Eating right, exercising and relieving stress by taking time off can help boost your energy.

Loving the work will also help you have the high energy needed to work long hours; motivate donors, volunteers and staff; and meet the expectations you have set for yourself or others have set for you.

## **9. Perseverance**

One thing that senior development professionals have learned is that perseverance is a highly needed quality. Major and planned gifts, in particular, require building long term relationships; perseverance pays off. If donors think the organization has forgotten about them they may just move on to the next organization.

If your development office needs to undergo a computer conversion, perseverance is definitely going to be required! This is a tedious and frustrating process and one that never seems to be completed in the expected timeframe.

So how do you cultivate perseverance? Part of the secret to perseverance is setting goals and realistic benchmarks to measure success. This will keep you from wanting to throw in the towel when the going gets tough. Strategic planning is one way to develop reasonable timelines for yourself, and help you understand that often good things take time. CEOs and development officers are often under a great deal of pressure to raise money quickly. Entrepreneurial board members who are shrewd business people are often accustomed to working on the basis of instant decisions, and may want the development office to just "go out and do it" without adequate planning. Be careful not to get so caught up in keeping your head above water that you do not have the time to plan. A recent survey asking development professionals what their biggest challenge is shows that lack of time for planning as the leading challenge listed. Working on long-term goals for a specific amount of time each day can help. And understanding that you should focus 90-95 percent of your

time on the 5-10 percent of donors who account for 90-95 percent of all the gifts your organization will receive helps as well.

Of course sometimes the organization itself needs to cultivate patience and persistence, so helping to build a philanthropic culture within the organization is a big part of your role. At the end of this chapter, there is a quick and easy assessment to help determine the organization's commitment to building a philanthropic culture. One of your major tasks may be helping your board and executive staff understand that fundraising is all about building relationships and that if you persevere in this relationship building, your organization will benefit tremendously. If you can impart this knowledge to your organization's leaders, you will rise to the top of your field. You must take the time to plan strategically; otherwise your organization will be left behind in the dynamic and ever-evolving world of the nonprofit sector. Leadership should look at the return on investment of careful, strategic planning.

### **10. Presence**

This may be the hardest to define and the hardest to cultivate in a development professional. Perhaps the closest thing to this may be a "perception of poise." A more contemporary definition may be closer to "positioning yourself." Presence can also be described as the ability to command attention and being respected as a professional.

First, look and act professional at all times. Development professionals, especially when meeting with donors or potential donors (which may be all of the time) should wear a suit and tie, or for women, a suit, nice dress or pant suit. Although some nonprofits adopt a more casual atmosphere, dressing for success is important for the development professional because you will be very visible in the community. And of course, you never know when that million dollar donor may walk in the front door! Being well dressed and well-groomed will give you a sense of pride and confidence that is necessary for a sense of presence. This does not necessarily mean that you need to spend a lot of money on clothes and new car, but looking good and driving a respectable looking car can help add a sense of presence. Good posture, an open and welcoming facial expression can be very meaningful, especially when you remember that you only have one opportunity to make a first impression.

## **Conclusion and Recommendation**

People do not live in a perfect world. All children wherever they live and no matter how poor their families are, they deserve a high quality education. Yet, it is a reality that in developing countries such as the Philippines, the government just cannot or will not cover the cost of providing quality education for its people.

As an alternative and support to the inadequate resources, the school can find ways to generate its own income and provide education to even the poorest students without relying on government support or charging excessive student fees. Part of the school's business plan is a key document both for securing funding and providing a common vision to guide the school's development.

The concept of self-sufficiency should be addressed among schools. And this was what the researchers in this study had discovered during their interview. Resource generation which is not fund raising but friend raising focuses on the value of paying forward and giving back. It puts emphasis on the very concept of multiplier effect wherein one looks for

the right people who share the same advocacy as his and transforming such selling of advocacy towards the fulfillment of another person's need.

Based on the results of the study, the researchers arrived with the following recommendations which will serve as a basis for developing resource generation program.

1. Build and utilize the network of people who share the same advocacy in raising funds to sustain educational institutions' needs towards quality education. Build trust in donor relationships. See your donors as partners of your advocacy. Make them feel the sense of co-ownership. See your donors as partners of your advocacy. Make sure that donors' money is well spent and their trust is not misplaced
2. Establish an efficient and effective mechanism for school resource generation.
3. Encourage community involvement towards a sustainable school resource generation. Prepare to change the approach from fundraising to friend raising. Do not forget the people who give their time and can be as valuable as those who give money. Be aware of the variety of ways in which donors help the organization.
4. Make a conscious decision to work only for organizations whose mission you feel passionate about. Remember the adage—"do what you love and the money will follow."
5. Strive to be a change agent within the organization for which you work. Develop a plan to educate the organization's leadership about philanthropy.
6. Remember that the donor's interest is always the foremost consideration in any decisions involving fundraising.

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# Academic and Social Engagement of Foreign Faculty in Korean Higher Education Institutions

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## Abstract

The purposes of this study were to investigate the actual conditions of teaching and research activities of foreign faculty, and to provide policy implications for the foreign faculty in Korean higher education institutions (HEIs). To accomplish the purposes of this study, the survey questionnaire including questions about the current status of the foreign faculty appointment and the actual conditions of teaching and research activities were distributed to all four-year HEIs in Korea. The t-test and ANOVA analysis were employed to compare statistical differences between groups based on institutional characteristics.

The results indicated that the distribution of faculty analyzed by position did not differ much from the analysis results by institutional location and size. Related to teaching activities, foreign faculty members are teaching about 7 credit hours of major courses and 9 credit hours of elective courses. This trend did not show significant differences from the results analyzed by location and by size, yet for elective courses, overall the proportion of lectures offered by part-time faculty members was higher than that provided by full-time faculty members. For research activities, foreign faculty members have published more research papers in international journals than in Korean journals. In addition, the foreign faculty at the universities in the Seoul metropolitan area had more active research activities than their counterparts in universities in non-metropolitan areas.

Two policy recommendations including further systematic analyses to understand foreign faculty members' engagement such as teaching and research activities in Korean universities and establishing and providing policy guidelines for the appointment of foreign faculty to HEIs were offered.

**Keywords:** Foreign Faculty, Teaching and Research, Academic and Social Engagement

## I. Necessity and Purpose of the Study

Along with internationalization, the mobility of foreign faculty and scholars as well as foreign students has been increasing in the world. Following the world trends, the number of foreign faculty in Korea has dramatically increased for the last ten years. The total number of foreign faculty was 1,313 in 2000 but greatly increased to 5,960 in 2012 and the number has reached 6,130 in 2013 although there was a slight decrease in 2015.

The exchange of faculty and scholars among countries has significant benefits, yet can arouse new issues. For instance, college culture or academic climate might be different in different countries, therefore foreign faculty from other countries might have difficulties in their colleges and academic lives in Korea. As the number of foreign faculty continuously increased, various issues related to foreign faculty have been addressed in and out of Korea.

The number of the foreign faculty is expected to keep increasing due to the trend of internationalization and the university evaluation system in Korea that provides advantages to universities hiring more foreign faculty members. Consequently, the issues associated with foreign faculty will be constantly brought up and therefore, it is necessary to provide in-depth discussions and practical implications to deal with foreign faculty issues. To be specific, there has been much concern regarding internationalization in higher education, yet limited research has been conducted on foreign faculty, which requires more basic studies.

This study aims to analyze the teaching and research activities and social engagement of foreign faculty in Korean higher education institutions, and to provide policy implications.

## **II. Issues in Teaching and Research Activities**

Kim, Wolf-Wendel, and Twombly (2011) examined the satisfaction level and research productivity of foreign faculty and found that foreign faculty members were significantly more productive in research than their U.S. counterparts. Mamiseishvili and Rosser (2010) also found similar results on research productivities, but they also found that foreign faculty members were less productive in teaching and service than their U.S. colleagues. Those studies indicate that foreign faculty may have higher research productivities, but lower teaching and service productivities than their U.S. counterparts.

In Korea, only few studies were conducted on foreign faculty. Those studies (Kwon, 2013; Seoul National University, 2013; KCUE, 2012a, 2012b; Ilan, 2013) addressed the issues related to foreign faculty including their teaching and research experiences, difficulties in adjusting to higher education communities, and challenges they faced as a profession in Korea. First of all, the quality of lectures by foreign faculty members seems quite low in general. Students and colleagues considered that there is a significant difference in the preparation and the actual teaching activities among foreign faculty members, and students and colleagues perceived, in most cases, that teaching abilities of foreign faculty are insufficient too.

Second, in the case of some foreign faculty members, the commitment to teaching activities is relatively low. There may exist differences among universities, but most foreign faculty members were employed under short-term contracts. This helped universities to easily recruit foreign faculty members, but inevitably led to low levels of commitment of those newly hired members. Particularly the foreign faculty members who were in short-term employment in universities in the non-Seoul metropolitan areas, tend to consider the Korean universities as temporary work-places and want to move to other countries such as Japan once they get chances. Because of their low levels of commitment, some of the foreign faculty members may not make their best efforts in offering good lectures.

The problems associated with teaching and research activities of foreign faculty include the appointment of less qualified foreign faculty who are not experts in related fields, short-term appointment of foreign faculty, and low student ability to take English-medium courses. Foreign faculty members also complained that there were few or no colleagues and students to conduct research together, not enough administrative supports including English-speaking staff, and insufficient reward system for research activities.

### **III. Research Methods**

#### **1. Subject of survey and sampling**

For the purpose of exploring the teaching and research activities of the foreign faculty members, the survey questionnaire was sent to all four- year HEIs in Korea. The questionnaire included questions on personal characteristics (nationality, highest degree earned, type of employment etc.) and teaching & research activities. Of 104 HEIs responded to the survey, 8 HEIs indicating no international faculty in their universities, and 24 professors holding Korean nationality were excluded. Finally, 2,767 foreign faculty in 96 HEIs were used for this study, which accounted for 51.6% of all 5,358 foreign faculty in Korea in 2013.

#### **2. Content of the questionnaire and analysis method**

The survey questionnaire consisted of two main parts. The first part inquired about personal characteristics including nationality, highest educational degree earned, employment type, place of teaching, and faculty position and so forth. The second part contained a number of questions related to teaching and research activities. Teaching activities included the number of credit hours and English-medium instruction courses to teach (major, elective and other courses at both the undergraduate and graduate levels) and research activities that take into consideration were number of journal articles published and participation in academic conferences. Because of the different natures of the data, only teaching and research activities of foreign faculty were analyzed in the study.

Since the purpose of this study was to describe the teaching and research activities of foreign faculty in Korean HEIs, descriptive statistical analyses were employed. In addition, t-test and ANOVA analysis were employed to compare statistical differences between groups. In order to better understand the personal characteristics and teaching & research activities of foreign faculty members, universities were classified based on location (Seoul Metropolitan Area & Non-Seoul Metropolitan Areas) and size (Large & Small). Since the characteristics of universities based on their locations and sizes are different (Rhee & Choi, 2009) and those are the commonly used categories when the Korean government evaluates the sponsored projects, we used those categories. The classification of the university size was based on the student enrollment: universities considered large compromise of over 10,000 students.

The information on employment status (full-time or part-time) of foreign faculty was obtained through documents provided by each individual university. Faculty position was categorized in three classes, namely professor, associate professor, and assistant professor, and full-time lecturers were placed under the “assistant professor” category in this study.

### **IV. Results on Teaching Activities**

The results showed that part-time foreign faculty members offered more elective courses than their full-time counterparts in universities in the Non-Seoul metropolitan area and Large-sized universities, and this deserves further explanation.

Universities in the Seoul metropolitan area and Large-sized universities pursue not only quantitative development but also qualitative excellence, and they are making great efforts to enhance their global competitiveness. Therefore, they should employ qualified foreign faculty members and provide lectures at a global level. However, the study results indicated that they

probably provide relatively low-quality lectures compared to universities in non-Seoul metropolitan areas and Small-sized universities.

Analysis by position showed that assistant professors taught more major and elective courses than full professors or associate professors. This overall tendency was also reflected in the analyses by location and by size.

## 1. Analysis on Teaching Activities of Foreign Faculty

### 1) Credit Hours Taught by Foreign Faculty

The analysis on teaching activities of foreign faculty members was conducted based on the average credit hours taught by foreign faculty. Of foreign faculty members, 1,242 taught major courses and 1,516 taught elective courses. Among them, 403 faculty members offered both major and elective courses, 839 taught only major courses and 1,113 taught only elective courses.

Analysis results regarding the average credit hours taught by foreign professors are as follows. Foreign faculty members taught an average of 7.4 credit hours for major courses and an average of 8.9 credit hours for elective courses. When the location of institutions was taken into consideration, the foreign academics in non-Seoul metropolitan areas taught more major courses than their counterparts in the Seoul metropolitan area, and the foreign faculty members working in Small-sized universities had heavier major course teaching load than their counterparts in Large-sized universities. In addition, foreign professors working in non-Seoul metropolitan areas taught more elective courses than their counterparts in the Seoul metropolitan area, and foreign academics in Large-sized universities provided more elective courses than those in Small-sized universities.

**Table 1:** Average Credit Hours to Teach, by Location and Size

Classification	Seoul Metropolitan Area		Non-Seoul Metropolitan Areas		Large		Small		Total	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
Major courses	388	7.04	854	7.59	734	7.25	508	7.66	1,242	7.4
Elective courses	675	8.17	841	9.44	946	9.10	570	8.50	1,516	8.9

### 2) Credit Hours Taught based on Employment Status

The teaching activities of foreign faculty members analyzed by employment type, location and size are as follows. In general, part-time faculty taught more major courses (7.06 credit hours) than their full-time counterparts (7.04 credit hours). This overall tendency was also reflected in the analysis by location. In other words, there was no significant difference in the credit hours taught by both full-time and part-time professors between the Seoul metropolitan area and non-Seoul metropolitan areas. The results analyzed by size revealed similar results.

**Table 2:** Average Credit Hours Taught by Foreign Faculty

Classification		Location		Size		Total
		SMA	NMA	Large	Small	
Major Courses	Full-time	7.04	7.57	7.21	7.64	7.39
	Part-time	7.06	7.69	7.49	7.83	7.61
	Subtotal	7.04	7.59	7.25	7.66	7.42
	t	-.02	-.28	-.57	-.26	-.54
Elective Courses	Full-time	8.25	8.96	8.77	8.38	8.62
	Part-time	6.15	11.74	11.38	9.69	10.87
	Subtotal	8.17	9.44	9.10	8.50	8.88
	t	4.04***	-5.82***	-4.59***	-1.82	-5.04***

\*SMA: Seoul Metropolitan Area, NMA: Non-Seoul Metropolitan Areas

A statistically significant difference existed in elective courses. In general, part-time faculty members taught more elective courses (10.9 hours) than their full-time counterparts (8.6 hours). A further analysis by location revealed that part-time foreign faculty undertook more elective courses than full-time faculty in non-Seoul metropolitan areas. In contrast, in the Seoul metropolitan area, full-time foreign faculty (8.25 hours) had more elective courses than their part-time counterparts (6.15 hours). In addition, elective courses offered by part-time faculty were more than those provided by full-time faculty in both Large-sized and Small-sized universities.

### 3) Credit Hours Taught by Academic Position

The credit hours taught by full-time foreign faculty members analyzed based on academic position are as follows. In general, assistant professors taught the largest number of both major and selective courses. That is, for the major courses, assistant professors took an average of 7.7 credit hours, while an average of 6.2 and 5.5 credit hours were undertaken by associate and full professors. As for the elective courses, the average credit hours taught by assistant, associate, and full professors were 8.9, 4.6 and 3.5 respectively.

**Table 3:** Credit Hours Taught by Full-time Foreign Faculty

Classification		Major Programs		Elective Programs	
		No.	Mean	No.	Mean
Total	Professor (a)	67	5.39	28	3.52
	Associate Prof. (b)	123	6.24	47	4.60
	Assistant Prof. (c)	921	7.69	1,268	8.88
	Subtotal	1,111	7.40	1,343	8.62
	F	13.80***		26.97***	
	Post-test	a<c, b<c		a<c, b<c	

\* Scheffe post-test

The results analyzed by location and size are presented as follows. For the major courses, assistant professors taught more in both Seoul metropolitan area and non-Seoul metropolitan areas, which was statistically significant. However, differences between full-time and part-time professors were not statistically significant. In non-Seoul metropolitan areas, assistant professors taught more courses compared with full professors. The analysis by size indicated similar results. That is, assistant professors offered significantly higher number of courses in Large-sized universities.

**Table 4:** Average Credit Hours Taught by Position

Classification		Location		Size		Total
		SMA	NMA	Large	Small	
Major Courses	Professor (a)	5.14	5.67	5.22	6.00	5.39
	Associate Prof. (b)	4.91	6.96	6.17	6.50	6.24
	Assistant Prof. (c)	7.58	7.74	7.62	7.78	7.69
	Subtotal	4.45	7.57	7.21	7.64	7.39
	F	10.85***	4.47*	11.26***	2.1	13.80***
	Post-test	a<c, b<c	a<c	a<c, b<c	-	a<c, b<c
Elective Courses	Professor (a)	3.14	4.20	3.83	2.57	3.52
	Associate Prof. (b)	3.00	6.00	4.66	4.33	4.60
	Assistant Prof. (c)	8.59	9.15	9.11	8.53	8.88
	Subtotal	8.25	8.96	8.77	8.38	8.62
	F	17.61***	9.03***	19.27***	8.11***	26.972***
	Post-test	a<c, b<c	a<c, b<c	a<c, b<c	A<c, b<c	a<c, b<c

\* SMA: Seoul Metropolitan Area, NMA: Non-Seoul Metropolitan Areas

\* Scheffe post-test

Meanwhile, results revealed a similar trend concerning the elective courses. That is, assistant professors taught a larger number of courses compared with full or associate professors, and the differences were statistically significant. This result also held true for the analysis by size.

## IV. Results on Teaching Activities

### 1. Summary and conclusion

The purposes of this study were to investigate the current status of the foreign faculty appointment and the actual conditions of teaching and research activities, and to provide policy implications for the foreign faculty in Korean HEIs. To accomplish the purposes of this study, the survey questionnaire was distributed to all the four-year HEIs in Korea. The questionnaire included questions about the current status of the foreign faculty appointment and the actual conditions of teaching activities. The data from 2,767 foreign faculty members, which accounted for 51.6% of all foreign faculty in 2013, were analyzed.

The results with respect to the appointment type and teaching activities are as follows. Related to teaching activities, foreign faculty members taught an average of 7.4 credit hours for major courses and an average of 8.9 credit hours for elective courses. This trend did not

show significant differences from the results analyzed by location and by size, yet in detail, there were some differences. That is, in the case of major courses, there was no statistically significant difference by appointment type, location and size, but for elective courses, overall the proportion of lectures offered by part-time faculty members was higher than that provided by full-time faculty members. However, further analyses by location and size revealed that part-time foreign faculty members undertook more selective courses than their full-time counterparts in Large-sized universities and universities in the Non-Seoul metropolitan area.

The higher proportion of part-time faculty teaching elective courses is related to the quality of the lecture. Lately, in Korea, elective courses are being emphasized along with major courses. Due to the attempt to promote internationalization of teaching and learning, most of the elective courses taught by foreign faculty members might be language courses or lectures related to internationalization. The results showed that part-time foreign faculty members offered more elective courses than their full-time counterparts in universities in the Seoul metropolitan area and Large-sized universities, and this deserves further explanation. Universities in the Seoul metropolitan area and Large-sized universities pursue not only quantitative development but also qualitative excellence, and they are making great efforts to enhance their global competitiveness. Therefore, they should employ qualified foreign faculty members and provide lectures at a global level. However, the study results indicated that they probably provide relatively low-quality lectures compared to universities in non-Seoul metropolitan areas and Small-sized universities.

Analysis by position showed that assistant professors taught more major and elective courses than full professors or associate professors. This overall tendency was also reflected in the analyses by location and by size. The phenomenon showed that assistant professors were the main contributors to the increase of English-medium instruction courses in Korea. With no difference in the analyses by location and by size, assistant professors taught two more credit hours of major courses, and two times more elective courses than full-time foreign faculty members.

## **2. Policy Implications**

Based on the results of this study, some policy recommendations are offered. First, since this study was carried out as a starting point to analyze the current status and the teaching and research activities of foreign faculty, further systematic analyses will be useful for understanding foreign faculty members' engagement in Korean universities. This study has some limitations in that not all HEIs were examined and only limited variables on teaching and research activities were used for analysis. For instance, in this study, teaching activities were simply analyzed based on the appointment type of faculty and the credit hours they taught. Therefore, more variables and related factors including the research activities and living environments should be considered to understand the bigger picture of the foreign faculty in Korea.

Second, policy guidelines for the appointment of foreign faculty should be established and provided to HEIs. Unlike the domestic faculty appointment, appointment of foreign faculty was loosely enforced in terms of the required degree level and basic qualifications. Therefore, there should be a strict quality control in the process of hiring foreign faculty members. Currently, many universities are hiring foreign faculty members focusing more on their nationalities rather than their qualifications. In the long term, since the quality of foreign faculty is closely related to the competitiveness of higher education in Korea, the government should provide a guideline to control the basic level of quality. At least, government should

consider providing recommendations for HEIs to formulate similar required qualifications when hiring foreign faculty members and to follow the same process with the appointment of domestic faculty members.

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# **The Importance of Industry-University Linkages for the Chronological Evolution of Both Science and Technology in the West**

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## **Abstract**

This article aimed to discuss the historical evolution of industry-university linkages in the west regarding science and technology and to suggest what and how educational system should adopt from and adapt to. Nearly all knowledge has been transferable enabling strong linkages between national champion in some technologies and its associated sciences. Technology has evolved to be much science centric and more complex so that it has generated a greater chance for the firms to benefit from implementing complementary knowledge together. Science-based innovation has paved the ways as trustworthy resources for competitiveness and profitability. Germany had several advanced degrees in research and has had a high level of coordination and collaboration between universities and industries in order to optimize complementary knowledge for new inventions. The US firms have also navigated with the same direction but different strategies. While German firms have relied on the strong points in their in-house research laboratories and on a linear character model beginning with supply side, the US firms were likely to take mutual advantages from higher collaboration between in-house and university laboratories focusing on demand side (marketing point of view) and managerial capitalism. After the great depression, most US research universities have enjoyed the increasing number and amount of research funding from private sector. The advancement of the US engineering, science and training, a high level of mission flexibility, student and staff mobilization between high institutions, the independence of advanced academic institutions, and no limited single standard policy have helped the US maintain strong competitive advantages over its rivals in the 20<sup>th</sup> century. The results of the discussion imply that innovation can be conducted using complementary knowledge between science and technology with commercialization through non-linear characteristics model and high collaboration between industry and academic institutions. Thailand's educational system should have reasonable flexibility to missions, talent mobility, no lock-in prototype to only one single standard, and appropriate level of academic institution independence so as to pursue the firms and the nation's competitiveness in the long-run.

**Keywords:** Industry-University Linkages, Science and Technology, Chronological Evolution

The association between national excellence in some technologies and the brilliance in its interrelated sciences has been intensified since most knowledge was transferable and the stimulus to achieve valuable information was strengthen when knowledge was perceived to have a strong impact on business outcomes. The closer links between science and technology were partly caused by the increasing number of applications of novel science-grounded technologies (e.g. IT, material science, food science, biotechnology and nanotechnology) in various industries. The higher integration between science and conventional technologies signified that a higher yield was generated by practiced learning in the firm, instructed and agile workforce, and ability to understand and link to a broader

scope of prospective knowledge inputs. Moreover, a surged specialization of knowledge resulted in more potential networking than before in scientific and technical events (Cantwell and Santangelo, 2000).

Technology has been running into science-based and complex so that it offered larger opportunities to unprecedentedly combine and connect unrelated academic fields. In other words, technology fusion, technological diversification, and research and development fragmentation could not be avoidable. Moreover, innovation was likely to be developed upon multiple technologies. A single great product was built by combining several science-based technologies (Cantwell and Santangelo, 2000).

There was an increasing demand for applied sciences (such as engineering), complicated appropriate facilities for research and development, inter-institution collaboration, and intensive training for industry employees in research universities. Science-based innovation played a vital role as a consistent source of corporate's competitiveness and profitability (as Schumpeter suggested). Boundaries of the innovative firms become unclear. Furthermore, market-seeking aims were substituted by knowledge seeking strategies which combined complementary knowledge together in the meaningful and practical manner.

Beer (1958) found that the development of big corporations in Germany was associated with educational and training funding for academic researchers in an exchange for complementary knowledge and skills for industrial revolution and innovation. Most German companies constructed research and development programs at some research universities. Many coordinated and collaborated with outstanding prolific professors in certain complementary fields. Germany had a strong policy of self-sufficient country for the hazardous future war reasons. German advanced research institutes supported German companies with the provision of knowledge and strategic training, e.g. scientific methodologies, in combination with valuable advice for industrial developments. Then, German academic institutions gained budget and reputation in return. Therefore, both German academic institutions and industry have reaped mutual benefits from the arrangement for many decades. German famous organic chemicals have been successful in the market due to the close ties between research universities and science based coal dye industry. The dye companies did not just hire university-trained chemists. They have conducted a complicated network of coordination and cooperation between these parties resulting in superior creative academic labors (Resenbourg, 1988).

Nevertheless, Donseifer (1995) found that US strategic corporate technical management system outran or outperformed that of Germany since Germany had some weaknesses on the responsiveness to the market and customer's demand. German system was almost motivated by the supply side of industry. Moreover, it utilized fixed science-based system that was unproductive in aspects of institutional connectedness and market opportunities. Moreover, Rosenberg (1998) stated that during the last decade of 20<sup>th</sup> century, BASF and IG Fargen under Bosch did not support advanced academic institutions to involve in several confidential secrets. This policy decreased new entry, reduced the level of market competitiveness, and diminished the diffusion of complementary useful knowledge. According to Rosenberg (1998), Germany has granted an advanced degree in research, doctorate degree, first in Physics and later in Chemistry; however, this superb model was not delivered to Great Britain. However, The United States accepted this model and delivered it to the US state universities which was primarily established by land grants from federal government and consequently relied on state legislatures for financial support. The aims of

higher education and the character of university research signified unapologetically utilitarian' in their definitions.

The accomplishments of US companies differed from that of Germany in that both countries have different technological strategies (Dornseifer, 1995). On the one side, German companies have evolved on the strong background of their high quality of in-house research with linear character model. On the other side, US companies attributed their fast and consistent achievement to external elements, such as merger & acquisition and alliance networks (Cantwell, 2004). According to Rosenberg and Nelson (1996),

“Many have a firm belief in what has been called the ‘linear model’ of technological advance. They see unfettered research as the basis for technological innovations in industry. While the new government programs buy into some of this, they are insisting more and more on significant industry involvement in the final allocation processed, which means that industry will certainly influence the composition and nature of academic research.” The linkages between academic research and industry caused persistent technology transfer and sufficient financial support leading to continuous creation of new products and process prototypes and the competitiveness of the US industries.

Germany was likely to enjoy technical capitalism which had a lower level of entrepreneurship in university owing to the lack of catalyst; whereas, the US has favored managerial capitalism with a higher level of entrepreneurship. The US has long experienced using both top-down goal setting approach and bottom-up system approach in line with business need to effectively deal with business difficulties. The close linkages and the ease of transferability of career or flexible migration of men and facilities between industries and universities have been intensified much more in the US than Germany systematically pushing forward several advantages for the US universities and its industries at high speed. While German traditional system believed in linear character system which conceptualized a university as idea or knowledge generator but business as application creator, the US promoted career transferability, the linkages between advanced research institutes and industries paving the right way of learning for superiority in scaling-up production leading to innovation and advanced manufacturing system for greatest demands (Cantwell, 2011).

In the great depression period, several prestigious research universities, including Harvard, Columbia, Pennsylvania, John Hopkins, and Wisconsin, founded appropriate patenting standards for their science-based inventions to expand the opportunity to gain external funds in response to the dramatic decrease in federal financial support. Fortunately, the reduction of federal financial support was compensated by the consistent rise of private sector sponsorship. Industrial funding in combination of multidisciplinary science-based technologies related to a variety of complementary knowledge paved the way for industrial patronage to be highly institutionalized in many areas of technologies. In addition, the interconnectedness between business schools and other schools, especially science-based fields, was on the rise increasing the opportunities to establish new additional institutional structures so as to gain the advantages of the spillovers of knowledge flow as the result of globalization and openness policy.

During the war, most US scientific and technological advanced research intended to put focus on the great projects that could speed up the winning war termination. Among the highly advanced projects, Manhattan project stood out as an influential one that ‘made the unthinkable, thinkable.’ Industry funding for academic research was increasing from 2.6 percent in 1970 to estimated 6.9 percent in 1990. Estimated 19 percent of the number of

university research now was generated and associated with programs that had a link with industry in some important aspects (Cantwell, 2011). Additionally, federal government was likely to allocate funds to programs that had a good link with industry. Congress has paid attention to university research which closely linked to industrial development or was responsive to industry's demands. Therefore, several state universities had created new training programs and had institutionalized research programs to meet local industry demands. For example, rubber research and training in the university of Akron and railroad technologies in the university of Illinois and Purdue university.

Disciplines of engineering and applied science played a vital and intermediary role as the accomplishment in American academic endeavor. These two disciplines bridged that gap of interfaces between technology development and challenging pure science. According to Cantwell (2011), American evolution of hierarchical management and the independence of business ownership and business management were major factors affecting the spin-off of corporate R&D in the large corporations during WWII. Additionally, Rosenberg and Nelson (1996) noted that the advancement of the US engineering science and training helped to describe the desirability of the US research universities for the training of foreign scholars, especially in engineering. This was an important factor in the positive catching up of ASEAN countries. There was a good balance between the training, collaborative capability, and well-united proficiency on the one side, and the brain drain dispute on the other side. A high proportion of foreign students who graduated with a doctorate degree of science or engineering in the US have moved in the group of scientists and engineers laboring in the US.

The benefits of the diversification of the US university system, accessibility, and high level of diversified funding have contributed to 'academic entrepreneurship' whose curriculum and academic research were adjusted and implemented by means of profitable capability. The US state universities have collaborated with industry and have launched new programs and new curriculums responsive to the recognizable obligation of the state economy. Mowery and Rosenberg (1989) argued that with the rising demands of complex agricultural experiment centers for statistical examination, several research institutes, including MIT, the University of North Carolina, initiated various advanced centers for complicated statistical research. MIT was one of the main universities realized that the machinery and material used in teaching and large scale industrial demonstration were very expensive and promptly out-of-date. To tackle these problems, MIT aimed to create a strong collaboration between faculty members and industrial factories so as to gain access to actual production. Additionally, MIT established research laboratories of applied chemistry as a semi-autonomous laboratory through research contracts by big industrial companies. On the one hand, MIT faculty members and students gained plenty of benefits in research development as well as graduate studies. On the other hand, industrial firms could expedite their productivity in return or both parties mutually gained some advantages (win-win situation). In addition, several university advanced chemical engineering laboratories were used to support the US chemical industry, particularly during the World war when imports of German products were prohibited (Servos, 1980).

MIT realized the advantages of permitting students to work at production plants and business companies under professors' regulation in order to link the theory to practice because wanted skills need much more extensive interaction between universities and industries. Consequently, the strong US background of many US complementary disciplines was associated with strong ties between universities and industries. According to Cantwell (2004), Chemical engineering had to collect a wide range of methodologies which could be

upgraded and produced the grounds for many difficulty- tackling activities related to chemical-process plant design. The US repositioned an advanced academic institution's major mission to be scientific institution which had duty for the achievement of research and the advantages of American community in the long term.

A number of large US firms have strategically supported lots of US academic research in terms of fellowships or grants (cash payments or stipends) for conducting particular research projects in a period of time as a substitution for in-house research. Swann (1988) also pointed out that American firms obtained a lot of useful information through contact trips to fellow's laboratory and through the regular meeting of each professional community and they could collect solutions for many problems through academic contracts between industry and academic institutions. Specialized knowledge in a particular aspect has long delivered university potential values which ultimately contributed to time saving, cost reduction, productivity improvement, problem-solving approach, and product or process innovation. This model has expanded the opportunity for the firms to absorb essential knowledge from their partners and allow themselves to keep up with the latest complementary cutting-edge research and development. Many companies endorsed lecture series conducted by World's famous professors or scientists providing the firms with high level of opportunities to network with the top list of outstanding researchers. Several companies found that they had lots of advanced industrial laboratories but they had a problem of not being able to keep pace with all essential complementary knowledge and skills. Collaborative research between companies and industries could ease the gaps.

Today there is much more cooperation between academic institutions and industry in even developing countries. Most big firms have their in-house advanced laboratory. Nevertheless, top university research have still played a vital role in stimulating and enhancing the significance of R&D done in industry. Additionally, a survey conducted in 1980s decade at Yale suggested that executive respondents were being able to differentiate disruptive innovation from incremental innovation in some aspects. Advanced academic research conducted in universities could give rise to drastic changes in design and concepts leading to further higher implementations; whereas, the new and useful returns were frequently be created from ordinary incremental inventions conducted in firm-laboratories (Rosenburg and Nelson, 1996). According to CEO of Squibb, his firm gained complementary benefits from both in-house and university research laboratories, but it obtained breakthrough innovations from advanced laboratories in many alliance research universities which were funded to solve more complicated difficulties (Swann, 1988). In the past, enormous US domestic demand, the end of Germany imports, and the anxieties for large scale and large volume production all increasingly generated a high level of demand for science-based research and engineering. Since WWII engineering and some applied sciences have depicted as the associating discipline between science and technology partially leading to innovation-driven economy.

Thailand as a small developing country should learn from these two big different successful strategy-driven models of Germany and America. Globalization and the spillovers of knowledge flow are undeniable major mega-trends all countries have to confront with. Future technology has become much more complicated and science-based development which requires more and more complex competencies and cutting-edge knowledge. The development of innovation has long been much unprecedentedly mutually dependent on a variety of complementary knowledge. Industry-university linkages in line with the promotion of knowledge and career transferability can help accelerate the development of several important competencies of Thai firms and Thailand as a whole strategically

determining the next stage of catching-up or falling-behind. Big science, higher level of independence of higher institutions, the flexibility of university missions, a higher degree of university students and professors mobilization, decentralized university management system, non-linear character of social system, and accelerating industrial funding all have enriched the significance of industry-university linkages and promoted nation's prosperity. By nature of most industries, their innovations have quickly turned out to be outmoded; therefore, it has been mandatory for Thai firms to timely correspond to the current potential science-based research and selectively useful complementary knowledge. Well-established internal firm research hubs in conjunction with close ties and comprehensive interfaces with Thai research universities can help enhance firms' competitive advantages leading to the critical accomplishment of Thai firms and Thailand.

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# Factors Affecting Job Satisfaction of University's Personnel

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## Abstract

The objective of this research was to identify the Intrinsic and Extrinsic Motivation Factors that influenced employees' job satisfaction and to determine job satisfaction level of the employees. Quantitative survey research was conducted. 350 sets of questionnaires were distributed to employees in a private university in Thailand. Convenience sampling technique was used to collect data. The total sets of valid questionnaires were 180. The mean values indicated that employees were satisfied with their job, with the mean value at 3.83. Results from Multiple Linear Regression analysis indicated that Intrinsic and Extrinsic Motivation Factors significantly influenced employees' job satisfaction. Extrinsic Factors (Beta = 0.630) had a stronger influence on job satisfaction than Intrinsic Factors (Beta = 0.357).

**Keywords:** Intrinsic and Extrinsic Motivation Factors, Overall Job Satisfaction

## Introduction

Employees' motivational factors can create employees' job satisfaction which in turn would lead to more productivity. The more a job fulfills the employees' needs or values, the higher their job satisfaction level. Ozdemir (2009) claimed that employees with high job satisfaction expect long-term perspectives regarding their position in a company and they can be much more devoted to that organization and can obtain a high-level productivity in their work. Conversely, low job satisfaction can increase the turnover rate and low performance among the employees. Increases in job performance and decreasing turnover rate were main effects indicating that the employees were satisfied (Bigliardi, Dormio, Galati and Schiuma, 2012).

Job satisfaction has two core dimensions. The first dimension was intrinsic factors and the second was extrinsic factors. These two factors, intrinsic and extrinsic, had been widely studied to date. The distinction of these factors had played an important role for both developmental and educational purposes. Having intrinsic and extrinsic motivations were able to help increase employee's job satisfaction and improve their performance in the workplace. Moreover, the intrinsic and extrinsic motivations were also identified as the predictors for job satisfaction (Edrak, Yin-Fah, Gharleghi and Seng, 2013). Rafiq, Javed, Khan and Ahmed (2012) presented that both intrinsic and extrinsic factors could impact an employee's job satisfaction. Some research had shown that intrinsic factors could create job satisfaction more than extrinsic factors (Ismali and Nakkache, 2014) and vice versa (Bigliardi et al., 2012; Rafiq et al., 2012).

The purpose of this research was to identify which category of factors, between intrinsic motivation factors (Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth) and extrinsic motivation factors (Security, Working

conditions, University's policies, Status, Compensation and Interpersonal relations) would influence job satisfaction among personnel at a private university.

## Research Objectives

1. To determine job satisfaction level of university's personnel
2. To identify factors (Intrinsic vs. Extrinsic) that influence job satisfaction among university's personnel

## Literature

According to Edrak et al. (2013), intrinsic motivation factors consisted of six factors which are Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth. Whereas extrinsic motivation factors included Security, Working conditions, Company policies, Status, Compensation and Interpersonal relations. The key dependent variable was Job Satisfaction. These particular variables are described as follows.

Intrinsic motivation is an enjoyment or psychological state a person gains in the role in which an employee performs for reasons other than financial reward (Ismali and Nakkache, 2014). Intrinsic motivation factors include the following factors (Siddiqui and Saba, 2013).

**Achievement:** The success or accomplishment that an individual gets from his/her career.

**Recognition:** Gratitude or appreciation that an employee wants to obtain from the employer, other superior personalities in the organization.

**Advancement:** Advancement is the change or promotion in the actual job duties.

**Work itself:** Work itself is basically the nature of the job or actual job that the employees have to perform.

**Responsibility:** Accountability and the level of autonomy that employees have in their work environment.

**Personal Growth:** Personal growth is a potential for development of skills, knowledge, and/or wealth.

Extrinsic motivation is the attainment of rewards controlled by the organization, colleagues, or supervisors. Extrinsic motivation factors include the following factors (Edrak et al, 2013).

**Security:** Secure and stable employment including safety and protection from physical and emotional harm.

**Working conditions:** It refers to physical work setting and other facilities that create the environment for workers.

**Company policies:** It is policies that are prescribed by the administrators.

**Status:** Status is defined as any employer offered benefit that would give an employee a feeling of prominence or position.

**Compensation:** Compensation refers to all forms of financial returns and tangible services and benefits that are given by employers to employees.

**Interpersonal relations:** Relationship of the workers with the supervisor, peers, subordinates and other individuals in the organization.

Job satisfaction is defined as the feeling that a worker has about their job or a general attitude towards work or a job. There are various theories related to job satisfaction such as Maslow's Hierarchy of Needs, Alderfer's ERG Theory and Herzberg's Two-Factor Theory. These theories have been widely used for educational purposes, researches and in many organizations in order to have a better understanding about job satisfaction. However, the most relevant theory to this study is Two-Factor Theory developed by Herzberg in 1959 because this theory focuses on Motivator Factors (Intrinsic) and Hygiene Factors (Extrinsic) influencing job satisfaction and dissatisfaction (Kreitner, 2007). The conceptual framework of this study is also developed from this theory.

### **Herzberg's Two-Factor Theory**

Two-Factor Theory was developed by Frederick Herzberg in 1959. According to his research, he suggested that the characteristics of work and job dissatisfaction are quite different. He believed that removing the dissatisfying characteristic would not significantly make the job satisfying as each characteristic has its own sets of factors. There are 2 elements contributing to employees' behavior at the work place as described in Table 1.

The first element is Hygiene Factors which directly affects job dissatisfaction. Hygiene Factors are factors involving the presence or absence of job dissatisfaction. It includes Quality of supervision, Pay, Company policies, Physical working conditions, Relations with others and Job security. Herzberg said if these hygiene factors are poor to the employees, they would be dissatisfied whereas it can remove employees' job dissatisfaction if providing employees good hygiene factors (Daft, 2010).

The second element is Motivator Factors which influences on employees' job satisfaction. Motivator factors are the factors influencing job satisfaction based on fulfillment of high-need level. It consists of Achievement, Recognition, Work Itself, Responsibility, Advancement and Growth. Herzberg claimed that if the motivator factors are missing, the employees would feel neutral or no satisfaction to work whereas they would feel very satisfied and motivated if these motivator factors are met in their work (Daft, 2010).

**Table 1:** Two-Factor Theory

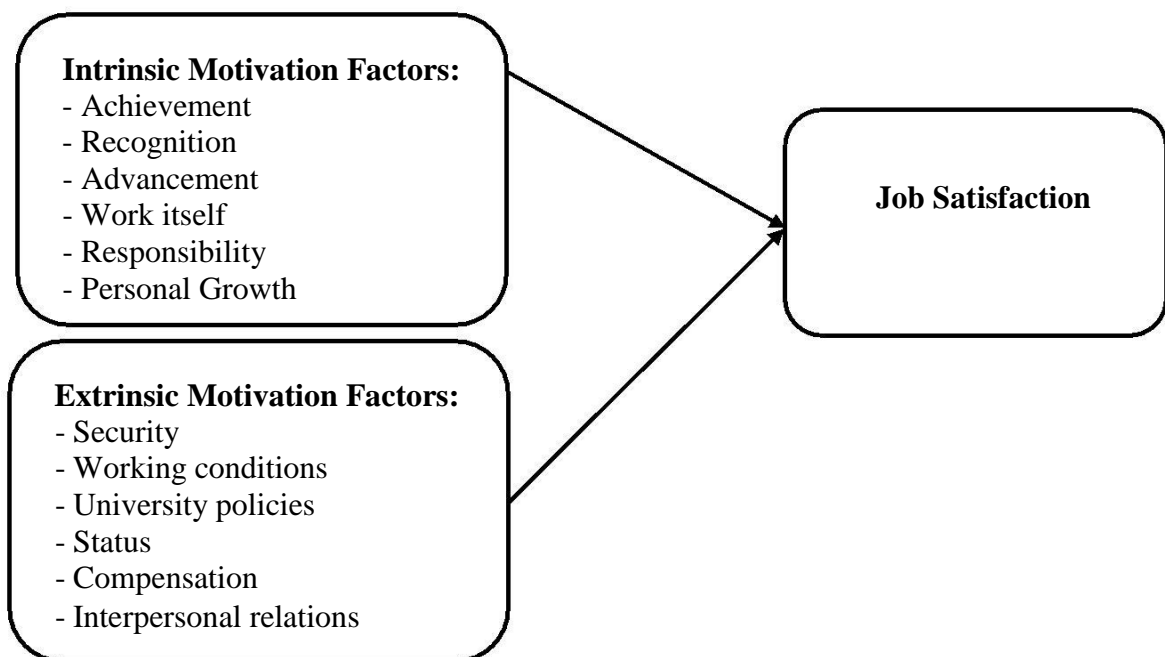
<b>Motivator Factors</b>	<b>Hygiene Factors</b>
<b>Leading to Satisfaction</b>	<b>Leading to Dissatisfaction</b>
Achievement	Company Policy
Recognition	Work Conditions
Work Itself	Status
Responsibility	Job Security
Advancement	Salary/Compensation
Growth	Relationship with peers

In a work place, managers can remove an employees' dissatisfaction by providing the employees enough hygiene factors and also using motivator factors to make the employees have greater job satisfaction (Daft, 2010). However, Herzberg further stated that managers trying to remove the factors which can create the job dissatisfaction (hygiene

factors) may just bring about peace in the organization but not motivation. If the managers need to motivate the employees, they should focus on the motivator factors instead. This would be effective to motivate the employees to get better performance (Borrowski, 2011).

## Conceptual Framework

The conceptual framework was developed based on the model of Job Satisfaction influenced by Herzberg's Motivation and Hygiene Factors as cited in the previous research of Edrak et al. (2013). In addition, the links between Job Satisfaction, Intrinsic Motivation Factors and Extrinsic Motivation Factors are based on the studies of Hidayat, Emara and Fawaz (2015), Ismaili and Nakkache (2014), Nyarko, Twumwaa and Adentwi (2014), Dhanapal, Alwie, Subramaniam and Vashu (2013), Bigliardi et al. (2012), Frye (2012), Westover (2012), Rafiq et al. (2012). According to Herzberg's Motivation and Hygiene Factors, Intrinsic Motivation Factors consist of Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth. Additionally, Extrinsic Motivation Factors consist of Security, Working conditions, Company policies, Status, Compensation and Interpersonal relations.



**Figure 1:** Conceptual Framework

## Methodology

Initially, 20 questionnaires items developed from the short version of Minnesota Satisfaction Questionnaires (MSQ) were used to gather the data from the sample group. These questionnaires covered Intrinsic Motivation Factors (Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth) and Extrinsic Motivation Factors (Security, Working conditions, Company policies, Status, Compensation and Interpersonal relations). Lastly, another 1 questionnaire item was for the overall job satisfaction developed from the study of Chung, Rutherford and Park (2012).

### Measurement on Intrinsic and Extrinsic Motivation

According to Spector (1997), the Minnesota Satisfaction Questionnaire (MSQ) has been a popular questionnaire that many researchers have used to measure intrinsic and extrinsic motivation. MSQ was developed by Weiss, Dawis, England and Lofquist in 1967 and separated into two forms, a full version containing 100 items of questionnaire and a short version consisting of 20 items. Especially, the short version of MSQ has been mostly and widely used to compute the extrinsic and intrinsic factors. As mentioned, the Extrinsic Motivation is to do something because it leads to a separable outcome while the intrinsic motivation is to do something because it is inherently interesting (Deci and Ryan, 2000). Table 2 presents the short version of MSQ. The short form contains 20 items measuring job satisfaction, classified into intrinsic and extrinsic satisfaction.

**Table 2:** Short form of the Minnesota Questionnaire

Short form of Minnesota Questionnaire
1. Being able to keep busy all the time. 2. The chance to work alone on the job. 3. The chance to do different thing from time to time. 4. The chance to be somebody in the community. 5. The way my boss handles his/her workers. 6. The competence of my supervisor in making decisions. 7. Being able to do thing that don't go against my conscience. 8. The way my job provides for steady employment. 9. The chance to do something for other people. 10. The chance to tell people what to do. 11. The chance to do something that makes use of my abilities. 12. The way company policies are put into practice. 13. My pay and the amount of work I do. 14. The chances for advancement on this job. 15. The freedom to use my own judgment. 16. The chance to try my own methods of doing the job. 17. The working conditions. 18. The way my co-workers get along with each other. 19. The praise I get for doing a good job. 20. The feeling of accomplishment I get from the job.

### Measurement on Job Satisfaction

In this study, overall job satisfaction was measured by using a single item measure, “My work is satisfying”, adapted from the study of Chung et al. (2012). Respondents were asked to rate their job satisfaction on a 5-point Likert scale from 5 (Strongly agree) to 1 (Strongly disagree).

Single-item measure of overall job satisfaction was preferable to a scale that is based on a sum of specific job facet satisfactions. Single-item measure eliminates item redundancy and reduces fatigue, frustration, and boredom associated with answering highly similar questions repeatedly. The use of a single item overall satisfaction measure is appropriate as job satisfaction is one dimensional, directly accessible for respondents and can be captured easily with a single-item measure.

### **Population and Sample**

The target population was personnel and faculty members in a private university in Thailand. The target population was 1,200 employees working in this university.

### **Sample Sizes**

Since this research used multiple regression analysis to test the hypotheses, Halinksi and Feldt (1970) stated that a conservative ratio of ten observations for each independent variable was found to be an optimal ratio for multiple regression analysis. Therefore, there were two independent variables with 12 categories in this research. As such the appropriate sample size was 120. 180 usable sets of questionnaire were returned.

### **Sampling Procedure**

The sampling method that employed by the researcher was convenience sampling technique. Convenience sampling was sampling by obtaining people who were conveniently available and the researcher chose the most convenient and economical methods to gather the data (Zikmund and Babin, 2013). The researcher distributed questionnaire at the center of the university.

### **Research Instrument**

A self-administered questionnaire was used to gather data and distributed to all participants. The short version of Minnesota Satisfaction Questionnaires (MSQ), developed by Weiss and others in 1967, was used in this research. This type of questionnaire has been widely studied and validated in many countries (Fields, 2002) including Thailand. MSQ could measure both intrinsic, extrinsic elements, including individuals' feeling to the job.

In this research, the questionnaire survey was divided into 3 sections. The first part included 2 main independent variables; intrinsic and extrinsic factors containing 20 questions, developed from the short form of MSQ. The second part consisted of a single-item measure of overall job satisfaction, cited in Chung et al. (2012). Lastly, the third part was a demographic questionnaire which consisted of six personal questions such as gender, age, year of work experience, education, social status and income per month. A 5-point Likert scale was used in the first and second parts. Five-point Likert scale included "Strongly agree" scored as 5, "Agree" scored as 4, "Neutral" scored as 3, "Disagree" scored as 2 and "Strongly Disagree" scored as 1.

In this research, the pretest respondents were chosen from the same population as the actual respondents. 30 respondents in the studied company were chosen for the pretest method. Intrinsic Motivation Factors including the questionnaire items of Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth indicated at 0.882. Extrinsic Motivation Factors including the questionnaire items of Security, Working conditions, Company policies, Status, Compensation and Interpersonal relations revealed at 0.868. For the reliability score of the questionnaires, the result indicated at 0.880. As all items were beyond 0.7, so it was considered as reliable (Tanchaisak, 2016).

Multiple regression analysis was used to test all hypotheses of the research in order to identify whether Intrinsic Motivation (Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth) and Extrinsic Motivation (Security, Working conditions, Company policies, Status, Compensation and Interpersonal relations) influence job satisfaction of the manufacturing workers.

## Results

### Respondents' Demographic Profile

The majority of the respondents were female, comprising 91 respondents or 50.6% of the total respondents and the rest were male, comprising 89 respondents or 49.4% of the total respondents. The majority of the respondents were between 27-30 years old, comprising 42 respondents or 23.3% of the total respondents. The second largest respondent group was around 41-45 years old, comprising 35 respondents or 19.4%. The third largest group was between 31-35 years old, comprising 30 respondents or 16.7%, followed by 28 respondents or 15.6% were aged around 36-40 years old. The next groups included respondents aged between 23-26 years old, 18-22 years old, higher than 51 years old, and 46-50 years old, comprising 26 respondents (14.4% of the total respondents), 11 respondents (6.1% of the total respondents), 5 respondents (2.8% of the total respondents) and 3 respondents (1.7% of the total respondents) respectively.

The majority of the respondents have been working with the university for more than 5 years, comprising 107 respondents or 59.4% of the total respondents. The second largest group was the respondents who have worked between 3-5 years, comprising 45 respondents or 25%. The minority group was the respondents who have worked less than 3 years, comprising 28 respondents or 15.6%.

### Education

The majority of the respondents held Bachelor's degrees, comprising 78 respondents or 43.3%. The next group held Diploma's degrees comprising 53 respondents or 29.4%. The smallest group of the respondents held higher than Bachelor's degrees, comprising 49 respondents or 27.2%.

### Income

The majority of the respondents comprising 109 respondents or 60.6% of the total respondents had income higher than THB 30,000. The second largest proportion was 19 respondents or 10.6% of the total respondents who had income between THB 15,001-20,000. The third largest group was 16 respondents or 8.9% who had income between THB 20,001-25,000. The next groups were the respondents who had income between THB 10,001-15,000, THB 5,000-10,000 and THB 25,001-30,000 which comprised 14 respondents or 7.8%, 12 respondents or 6.7% and 10 respondents or 5.6% respectively.

## Descriptive statistic of Intrinsic and Extrinsic Motivation Factors

Table 3 provides the mean values of Intrinsic and Extrinsic Motivation Factors and overall job satisfaction. The highest mean value was Extrinsic Motivation Factors with a mean of 3.75, rated

“Agree”. Intrinsic Motivation Factors had lower mean value at 3.62, rated “Agree”. Moreover, the mean value of overall job satisfaction was 3.83, rated “Agree”.

**Table 3:** Summary of Mean Value of Intrinsic and Extrinsic Motivation Factors and Overall Job Satisfaction (n = 180)

Summary of Mean Value of Intrinsic and Extrinsic Motivation Factors and Job Satisfaction (n = 180)			
Item	Mean	Std. Deviation	Rating
Intrinsic Motivation Factors	3.62	0.50	Agree
Achievement	3.74	0.72	Agree
Recognition	3.69	0.74	Agree
Advancement	3.56	0.84	Agree
Work itself	3.66	0.59	Agree
Responsibility	3.49	0.69	Agree
Personal Growth	3.64	0.60	Agree
Extrinsic Motivation Factors	3.75	0.49	Agree
Security	3.93	0.78	Agree
Working conditions	3.81	0.68	Agree
Company policies	3.91	0.67	Agree
Status	3.39	0.76	Neutral
Compensation	3.52	0.76	Agree
Interpersonal relation	3.82	0.72	Agree
Job Satisfaction	3.83	0.61	Agree

## Hypothesis Testing

Hypothesis testing was conducted by Multiple Linear Regression Analysis to examine whether Intrinsic Motivation Factors (Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth) and Extrinsic Motivation Factors (Security, Working conditions, University policies, Status, Compensation and Interpersonal relations) as independent variables influence job satisfaction as a dependent variable among manufacturing employees.

The results for Multiple Linear Regression Analysis for Intrinsic Motivation Factors (Achievement, Recognition, Advancement, Work itself, Responsibility and Personal Growth) and Extrinsic Motivation Factors (Security, Working conditions, University policies, Status, Compensation and Interpersonal relations) and their effect on job satisfaction were presented in Table 4.

**Table 4:** Results of Multiple Regression Analysis**Model Summary**

Model	R	R Square	Adjusted R Square
1	.721 <sup>a</sup>	.520	.514

a. Predictors: (Constant), Extrinsic, Intrinsic

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.123	2	17.062	95.756	.000 <sup>b</sup>
Residual	31.538	177	.178		
Total	65.661	179			

a. Dependent Variable: Job Satisfaction

b. Predictors: (Constant), Extrinsic, Intrinsic

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.172	.267		.643	.521
Intrinsic	.357	.076	.294	4.672	.000
Extrinsic	.630	.077	.513	8.137	.000

a. Dependent Variable: Job Satisfaction

The predictors were Intrinsic and Extrinsic Motivation Factors, while the criterion variable was Job Satisfaction. The linear combination of Intrinsic and Extrinsic Motivation Factors significantly influenced Job Satisfaction of the employees in this university,  $R^2 = .520$ , adjusted  $R^2 = .514$ ,  $F(2, 177) = 95.756$  and  $p = 0.00$ . Therefore, the null hypothesis was rejected, and the combination of Intrinsic Motivation Factors and Extrinsic Motivation Factors indicated Job Satisfaction of the employees at approximately 52%.

The results from Coefficient Table demonstrated the influence of two independent variables individually (not in combination) on Job Satisfaction. Individually, Intrinsic Motivation Factors significantly influenced Job Satisfaction at  $\text{Sig} = 0.00$  and Extrinsic Motivation Factors significantly influenced Job Satisfaction at  $\text{Sig} = 0.00$ .

The Beta values were the weights associated with the regression equation. According to the Beta weights, the regression equation was as follows.

Employees' Job Satisfaction =  $0.172 + 0.357$  Intrinsic Motivation Factors +  $0.630$  Extrinsic Motivation Factors

Based on the Coefficients Table, the influences of Intrinsic and Extrinsic Motivation Factors on Job Satisfaction of the employees were as follows.

Extrinsic Motivation Factors had more influence on Job Satisfaction of the higher education institutions employees (Beta = 0.630). Intrinsic Motivation Factors had less weights on Job Satisfaction of the higher education institutions employees (Beta = 0.357).

## Conclusions and recommendations

In this study, the results found that both intrinsic and extrinsic factors have significant effect on the higher education institution employees' job satisfaction. However, extrinsic motivation factors were more influential than intrinsic motivation factors (the beta value of extrinsic motivation factors = 0.630 while the beta value of intrinsic factors = 0.357).

Compared with the study of Edrak et al. (2013) conducted in Malaysia, the results also revealed that both intrinsic and extrinsic factors significantly influence employees' job satisfaction.

However, there was also a different point as intrinsic motivation factors were more influential than extrinsic factors. With this difference, we should take into account Hofstede (2010)'s study that the assessment of these factors might be different depending on the cross national level.

Another supporting previous research from Rafiq et al. (2012) conducted in Pakistan had closely similar results to this study. The research presented that both intrinsic and extrinsic motivation factors could significantly impact the employees' job satisfaction. Nevertheless, the extrinsic motivation factors had more influence than intrinsic motivation factors. They also mentioned that the employees would report high job satisfaction if they are provided with more extrinsic factors than the intrinsic factors.

Moreover, in the study of Ismaili and Nakkache (2014) conducted in Lebanon, the results supported that although intrinsic and extrinsic factors significantly influence the employees' job satisfaction, extrinsic factors were more influential than intrinsic factors. They mentioned that extrinsic factors play more important role than intrinsic factors in developing countries, which is consistent with the results from this research.

In this study, one of extrinsic factors, Status, had a low mean score at 3.39 for the item, "I have a chance to tell other people what to do". This item demonstrated that employees were unsure with their current status. It was very likely that they consider they had similar status as other employees, not much difference. Compensation had the second lowest mean score at 3.52 for the item, "My pay is proper with the amount of work I do". This item demonstrated that employees were unsure that pay was proper with the amount of work they do. They hesitate whether their pay was balanced with their tasks. To sort this issue out, the university should reconsider employees' pay rate and deeply take a look whether they pay it reasonably.

The results of this research revealed that both intrinsic and extrinsic factors significantly influenced personnel's job satisfaction. Management team and human resource

department should pay special attention to intrinsic and extrinsic factors in order to create employees' job satisfaction. In the study of Edrak et al. (2013), it also supports that intrinsic and extrinsic motivation factors are essential in improving job satisfaction.

To create more employees' job satisfaction, the university should focus more on Extrinsic Factors because the results from regression analysis present that extrinsic factors are more influential than intrinsic factors. Especially, factor of extrinsic motivation that should be more focused on is Status because this factor revealed the lowest mean score. In addition, institution should consider improving Compensation for employees in order to increase their satisfaction. They can increase employees' wage rate in the end to resolve the issue about compensation, which will lead to more employees' satisfaction.

This study used the survey questionnaire method to collect the data. Future research should conduct direct interviews such as face-to-face or group discussion, which would help to obtain more intensive and in-depth information. By directly speaking to the respondents, the researchers will have an obligation to ask the respondents to clarify more details about intrinsic and extrinsic motivation factors, rather than the limited details from a fixed questionnaire.

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# **The Relationship between Student Engagement and Satisfaction at a Private University in Thailand**

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## **Abstract**

This research aimed to study the relationship between students' engagement (academic challenge, collaborative learning, student-faculty interaction, enriching educational experience, and supportive campus environment) and MBA students' satisfaction at a private university in Thailand. Questionnaire was used as the data collection instrument to collect data from 313 current students who were studying in the MBA program at the university for at least 1 semester. Pearson Correlation analysis was used to test the relationship between student engagement and student satisfaction. The results showed that there was a relationship between student engagement and student satisfaction. Supportive campus had the highest relationship with student satisfaction followed by academic challenge, student-faculty interaction, collaborative learning, and enriching educational experience, respectively.

**Keywords:** Student Engagement, Student Satisfaction, Academic Challenge, Collaborative Learning, Student-faculty Interaction, Enriching Educational Experience, Supportive Campus Environment

## **Introduction**

Over the past two decades, many researchers have been studying the engagement of students in class which could have an impact on their satisfaction in the classroom. Hara and Kling (1999), Hendricks and Maor (2003), and Corno and Snow (1986) explained that an engagement between students and the school led to an effective education. As a result, there was a need to understand the relationship between student engagement and student satisfaction.

The objective of this research was to examine the relationship between student engagement and student satisfaction in an MBA program at a private university in Thailand.

## **Research Objectives**

1. To determine the relationship between the facet of student engagement (academic challenge) and student satisfaction of the MBA program at a private university.
2. To determine the relationship between the facet of student engagement (collaborative learning) and student satisfaction of the MBA program at a private university.
3. To determine the relationship between the facet of student engagement (student-faculty interaction) and student satisfaction of the MBA program at a private university.

4. To determine the relationship between the facet of student engagement (enriching educational experience) and student satisfaction of the MBA program at a private university.
5. To determine the relationship between the facet of student engagement (supportive campus environment) and student satisfaction of the MBA program at a private university.

This study enabled MBA faculty members to understand the factors that could increase the student satisfaction, which would in turn allow them to provide an appropriate learning and teaching environment and support for students. An understanding of the factors that could increase students' satisfaction would help administrators to improve these factors to better serve the students' needs and make them satisfied with the program.

## **Paradigm of the Study**

Mann (2001) suggested that engagement is people's response or involvement towards the place they live in. Therefore, it is important for the school to enhance the student engagement for an effective delivery of education (Coates, 2006). Hu and Kuh (2002) and Krause and Coates (2008) defined student engagement as the efforts students put forth to activities relevant to learning. Students' engagement is related to the intersection between students and things that are important in their learning environment (Coates, 2006). Coates (2006) further explained that students' engagement included a broad range of interactions that learners faced in their study including teachers and the institution. Students who have high engagement participate in the school's activities both inside and outside of the classroom. Kuh (2007) reported that students who are engaged in school's activities had relatively higher learning outcomes.

Krause (2005) explained that for some students, the engagement between individual and institutional interests, goals and aspirations never occurs. Some students did not see the need to join any of the school's activities in the learning community. Engagement is more than involvement; it requires feelings and sense over the activity (Harper and Quayle, 2009).

Coates (2006) described engagement as "a broad construct intended to encompass salient academic as well as certain non-academic aspects of the student experience", comprising the following:

- Active and collaborative learning
- Participation in challenging academic activities
- Formative communication with academic staff
- Involvement in enriching educational experiences and
- Feeling legitimated and supported by university learning communities

## **Paradigm of the Study**

The National Survey of Student Engagement (NSSE) was developed by Indiana University (National Survey of Student Engagement, 2011; NSSE, 2002). It defines student engagement as students' involvement with activities and conditions likely to generate high-quality learning (Coates, 2006). NSSE suggested that students' engagement represents "the amount of time and effort students put into their studies and other activities, and how the institution uses its resources and organizes the curriculum and other learning opportunities to

get students to participate in activities that decades of research studies show are linked to student satisfaction”

Kuh et al. (1991) stated that NSSE measure showed what students do during college generally matters more to what they learn and whether they persist to graduate than who they are or even where they go to college. High levels of student engagement are associated with a level of academic challenge, active and collaborating learning, student-faculty interaction, enriching educational experience, and supportive campus environment (facets of NSSE). These factors are related to student satisfaction. Thus, high levels of student engagement are necessary for and contribute to student satisfaction.

Pascarella and Terenzini (2005) examined the influence of education on learning and cognitive development, personal growth and change, socioeconomic attainment process, and quality of life. They found that “the greater a student’s engagement base on NSSE in academic work or in the academic experience in college, the greater his or her level of knowledge acquisition and student satisfaction in academic life”.

### **NSSE facets of Effective Educational Practice**

Based on 42 key questions, NSSE established five benchmarks of effective educational practice including a level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment (National Survey of Student Engagement, 2011).

#### **Benchmark1: Level of academic challenge**

NSSE’s first benchmark focuses on an educational practice. It recognizes that challenging intellectual and creative work is critical to student learning. High expectations for student performance and emphasis on importance of academic effort help promote high levels of student achievement. Such activities include time spent preparing for class; a number of assigned textbooks, books, papers, and reports; as well as coursework emphasizing on analyzing, synthesizing, making judgments and applying theories.

#### **Benchmark 2: Active and Collaborating Learning**

NSSE’s second benchmark focuses on an intense involvement and collaboration with peers which in turn help facilitate and enhance student learning. This benchmark includes asking questions in class, contributing to class discussions, making class presentations, working with peers during and outside of class, and tutoring. Interaction with peers has a direct effect on students’ academic achievement (Pascarella & Terenzini, 2005).

Astin (1993) stated that “the student’s peer group is the single most potent source of influence on growth and development during the undergraduate years. Students’ values, beliefs, and aspirations tend to change in the direction of the dominant values, beliefs, and aspirations of the peer group”.

Pascarella and Terenzini (2005) also stated that “peers can create powerful socializing agents in shaping persistence and degree completion”. Their reviewed studies indicated that peer influence is a statistically significant and positive force in students’ persistence decisions.

#### **Benchmark 3: Student-Faculty Interaction**

NSSE’s third benchmark focuses on observing the faculty inside and outside the classroom where students could see how experts solve problems in real-life. As such, the

faculty becomes a role model, mentor, and guidance for continuous learning. Activities include discussing grades, ideas from readings as well as career plans with an instructor; receiving prompt feedback; and working on a research project with a faculty member (Pascarella & Terenzini, 2005).

Students' overall involvement with the faculty has a direct influence on their academic achievement (Pascarella & Terenzini, 2005). Astin (1993) supported and suggested that "variations in student-faculty contact within any given institutional environment can also have important positive implications for student development".

In addition, Astin (1993) found that an overall student-faculty interaction had strong and positive correlations with a number of factors including satisfaction with the faculty, every self-reported area of intellectual and personal growth, a variety of personality and attitudinal outcomes, and behavioral outcomes.

Finally, Pascarella and Terenzini (2005) concluded that students' contact with faculty members outside the classroom can also impact students' general cognitive skills and intellectual development.

#### **Benchmark 4: Enriching Educational Experiences**

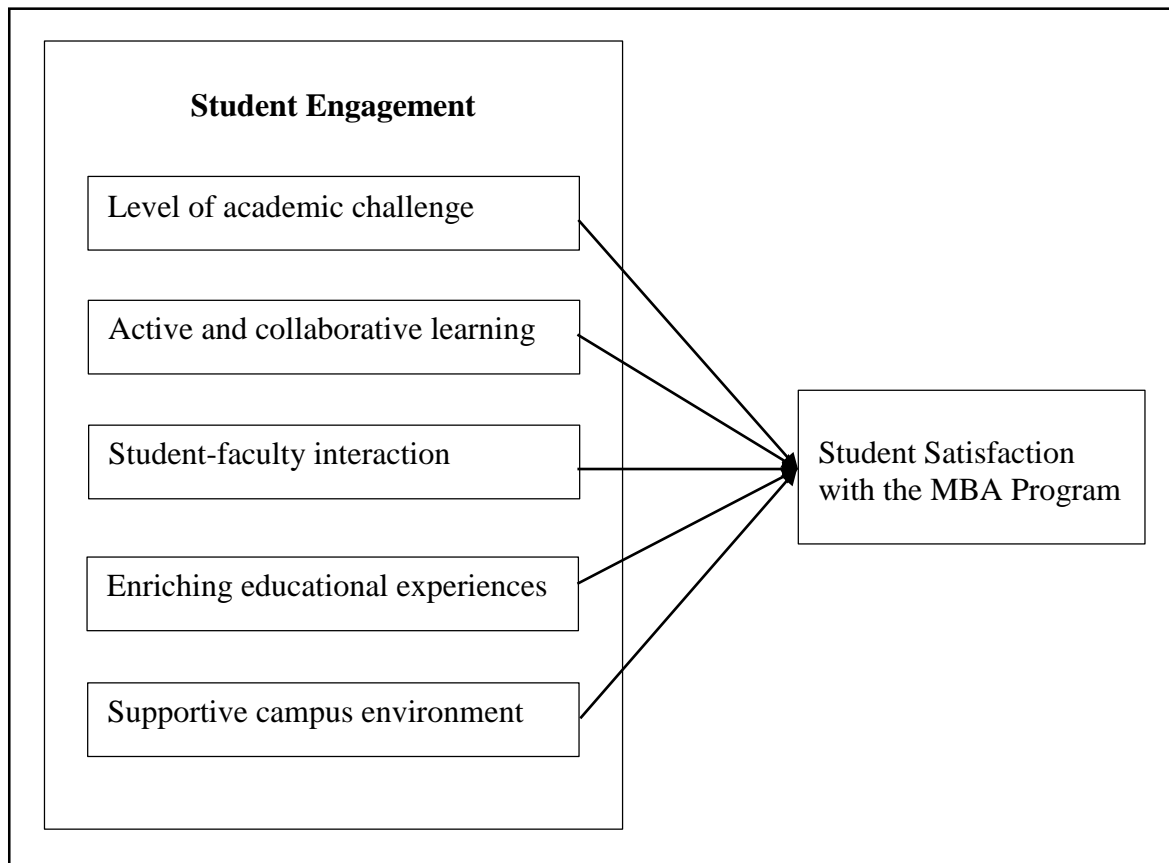
NSSE's fourth benchmark focuses on complementary learning opportunities inside and outside the classroom that help enhance the academic programs. Interaction with students of different races, ethnicities, religious backgrounds, social backgrounds, and the use of technology make learning more meaningful and more useful. Additionally, opportunities for internships, field experiences, community service, volunteer works and other similar activities provide students with another opportunity to apply their knowledge (Pascarella & Terenzini, 2005).

#### **Benchmark 5: Supportive Campus Environment**

NSSE's fifth benchmark states that students are more satisfied and can perform better at colleges that are committed to their success which in turn helps nurture positive working and social relations among campus groups. This benchmark includes a campus environment that provides support needed to succeed academically, non-academically, and socially.

In addition to relationships with students and faculty members, relationships with administration staff also affect students' academic achievement and satisfaction (Pascarella & Terenzini, 2005). Astin (1993) found that institutional staff members shape students' perceptions of an overall campus climate. This becomes particularly valuable when it involves support and encouragement from administrators, advisers, and academic counselors.

This research measured satisfaction of students in an MBA program based on the overall entire educational experience.



**Figure1:** Conceptual Framework

## Hypothesis

- H<sub>1</sub> There is a relationship between student engagement (level of academic challenge) and student satisfaction of the MBA program at a private university.
- H<sub>2</sub> There is a relationship between student engagement (active and collaborative learning) and student satisfaction of the MBA program at a private university.
- H<sub>3</sub> There is a relationship between student engagement (student-faculty interaction) and student satisfaction of the MBA program at a private university.
- H<sub>4</sub> There is a relationship between student engagement (enriching educational experiences) and student satisfaction of the MBA program at a private university.
- H<sub>5</sub> There is a relationship between student engagement (a supportive campus environment) and student satisfaction of the MBA program at a private university.

## Methodology

This research was a survey research which used a questionnaire as an instrument to collect and analyze data from the respondents (Tanchaisak, 2016). Data were collected from students enrolling in the MBA program at a private university. The total number of students who were studying in a program during 2014 (834 students) and 2015 (653 students) were

1,487 (Assumption University, 2011). Sample size was determined based on the table proposed by Yamane (1967). Convenience sampling method was used in order to collect data from 306 respondents in the MBA program.

The questionnaire consisted of three parts. Part I elicited demographic data. Part II applied NSSE (2002) scale to measure the level of student engagement (level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experience, and a supportive campus environment). The respondents were asked to indicate their level of agreement for each item on a 5-point Likert Scale (1 = ‘Strongly Disagree’ to 5 = ‘Strongly Agree’). Cronbach’s alpha or coefficient alpha ranged from 0.715-0.907. Part III measured the overall satisfaction level of the students towards the program of study.

## Results

In terms of respondents’ gender, there were 134 male respondents (42.8%) and 179 female respondents (57.2%). Respondents’ age groups were 20 – 30 years old which comprised 271 respondents (86.6%), 31 – 40 years old comprised 40 respondents (12.8%), and 41 – 50 years old comprised 2 respondents (0.6%). In terms of income per month, respondents whose income was lower than 10,000 baht comprised 60 respondents (19.2%); 10,001 – 20,000 baht included 68 respondents (21.7%); 20,001 – 30,000 baht comprised 71 respondents (22.7%); 30,001 – 40,000 baht income group had 49 respondents (15.7%); 40,001 – 50,000 baht income group included 31 respondents (9.9%), and the higher than 50,000 baht income group was made up of 34 respondents (10.9%).

Table 1 shows the mean scores for descriptive analysis for students engagement and overall satisfaction.

**Table 1:** Mean and Standard Deviation of the Variables

Variables	Mean	S.D.	Interpretation
Student Engagement			
• Level of Academic Challenge	3.61	.479	Agree
• Active and Collaborative Learning	3.82	.557	Agree
• Student-Faculty Interaction	3.11	.820	Neutral
• Enriching Educational Experience	3.49	.622	Agree
• Supportive Campus Environment	3.65	.663	Agree
Student Satisfaction	3.86	.765	Agree

## Hypothesis Testing

Table 2 shows the Pearson’s Correlation between students’ engagement and overall satisfaction.

**Table 2:** Hypothesis Testing under the Pearson's Correlation Method

Students' Engagement	Student Satisfaction	
	Pearson's Correlation Coefficient (r)	Significant value
Level of academic challenge	.422	.000
Active and collaborative learning	.267	.000
Student-faculty interaction	.368	.000
Enriching educational experiences	.259	.000
Supportive campus environment	.506	.000

Table 2 shows that all factors in the student engagement variable (level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and a supportive campus environment) had a positive relationship with student satisfaction. The significant value indicated was less than 0.05.

The student satisfaction had a very low positive relationship with active and collaborative learning ( $r = 0.267$ ), and enriching educational experiences ( $r = 0.259$ ).

The student satisfaction had a low positive relationship with the level of academic challenge ( $r = 0.422$ ), and student-faculty interaction ( $r = 0.368$ ).

The student satisfaction had a medium positive relationship with a supportive campus environment ( $r = 0.506$ ).

## Discussion of Research Findings

The result shows that there is a relationship between student engagement (level of academic challenge, collaborative learning, student-faculty interaction, enriching educational experience, and a supportive campus environment) and student satisfaction. This result is supported by many previous studies including Chen, et al., (2006), Korobova (2012), Korobova, and Starobin (2015). These researchers found some evidence to confirm that there is a relationship between student engagement and student satisfaction and thus the student engagement can affect satisfaction of students accordingly.

In order to increase a level of student satisfaction, an MBA program needs to focus on all factors concerning student engagement. The levels of relationship were ranked in order of importance from a supportive campus environment, a level of academic challenge, student-faculty interaction, active and collaborative learning, and enriching educational experience respectively.

Therefore, if an MBA program would like to increase a level of student satisfaction, it may need to focus on increasing a level of perception of students towards the aforementioned factors accordingly.

Based on the earlier discussion, if any MBA program at a private university can manage to increase the mean score from an 'Agree' to a 'Strongly Agree' level over each factor; it is likely to increase the positive perception of students towards the program.

Level of academic challenge: An MBA program at a private university needs to consider including challenging quizzes in class in order to encourage students to prepare themselves before class. If MBA students could not meet the standard or expectation of an instructor, the instructor may consider providing more assignments. In some courses, more assignments may not be suitable to help students, so the instructor may need to consider this subject by subject.

Active and collaborative learning: An MBA program needs to support active and collaborative learning in the university such as encouraging the students to have a buddy to support each other when studying. Moreover, a university may need to develop an activity to let the students interact with society such as including a project that allows students to help shop owners in a tourist area (i.e. a floating market). The main objective is to encourage students to teach the shop owner to speak English or teach basic accounting to record revenues and expenses to create an income statement. These activities will support students to participate in a community-based project. Last, it would seem practical to motivate MBA students to participate in class by allocating scores for participation.

Student-faculty interaction: An MBA program at a private university needs to encourage a relationship between students and instructors. Therefore, the program needs to develop or establish some activities which create a relationship or allow students to communicate more with their instructors in order to break the ice between them. Instructors may provide some of their available time to allow students to meet and have discussions outside of class. For example, some students may not clearly understand their research project; therefore, they may need more time after class to discuss with the instructor. Instructors may provide some communication channels for contact after class such as email or Line.

Enriching educational experiences: An MBA program needs to set up activities in advance to let students plan based on their availabilities. The decision to participate in an activity such as learning communities, internships or field experiences or else needs to be based on the students' availabilities and their interests. Therefore, an MBA program needs to provide information about activity days to students.

Supportive campus environment: An MBA program needs to support students not only in terms of education but also in other dimensions. A private university should notify students that some activities in the university may allow their family members to join such as the Christmas Eve or the Songkran festival. Moreover, these activities should include alumni as well to create connections between students. To support students in terms of providing a nice campus environment for academic success, an MBA program or a university should provide enough facilities for studying such as comfortable sofas in the library, and small private tables for group discussion.

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# **Empowering Technologies for Academic and Social Engagement**





# **The E-class as a Learning Tool for Political Science Students at De la Salle University-Dasmaringas**

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## **Abstract**

Universities around the world are constantly searching for means to improve the delivery of knowledge and subject to their students. De la Salle University-Dasmaringas, in a bid to take advantage of the e-technology, through its blended learning strategy, has virtually cut in half the course work, resulting in savings and unprecedented access to on-line sources. This study was primarily conducted on Political Science junior students of said course because they are considered the best sampling group. The study utilized the descriptive survey research design and data were gathered through the use of the questionnaire. Descriptive statistics was then applied. The study involved the entire third year students taking up Political Science at De la Salle University-Dasmaringas in the first semester of school year 2015-2016. There are forty four respondents which answered the questionnaire.

While the e-class has its advantages such as allowing struggling students to practice, improving their internet literacy, changing the classroom pace, demonstration of other skills, learning current events and news and improving content acquisition; it has also its inadequacies such as the lack of suitable materials, lack of interest on the part of students, poor technical and physical infrastructure, insufficient technical knowledge, absence of appropriate guidance and inadequate period to answer assessments. Indeed, it has been generally observed that while the e-class has its perks and advantages, it has also drawbacks which this study hopes to address and be given adequate solution.

**Keywords:** E-class, Technology, Learner

## **Introduction**

With the introduction of the computer and the internet into our lives, the means of communication and information not only changed but also the means that education is being taught in the classroom. In this aspect, e-learning has been adapted by many institutions to answer the trends in a changing educational landscape. E-learning (Liu, et al, 2010) in higher education can be understood as 'technology-enhanced teaching and learning within an education institution', and e-learning as 'instructional content or learning experiences delivered or enabled by electronic technology. It is also defined as learning facilitated and supported through the use of information and communications technology' to deliver content (learning, knowledge and skills) on a one-way (asynchronous) or multi-way (synchronous) basis. Indeed, (2010) it has been generally known that barriers to e-learning adaption include factors such as time commitment and workload issues (including the academic priorities for research), poor leadership, information technologies self-efficacy, lack of effective staff development and implementation issues. There have also been concerns about the cost and technology required

for implementation. And e-learning strategy should be set up at institutional level, implemented at faculty level and embedded in curriculum design.

Nevertheless, inspite of these perceived barriers, institutions like De la Salle University-Dasmariñas has adapted the e-learning strategy through the e-class embedded in its school book design. Its main reason was to improve the delivery of instruction by the use of technology and offer something new and unique to its students. E-learning (Sinclair, 2016) also provides students with better access to education, cuts costs, generates more knowledge and gives learners flexibility and more interaction.

There have been varied reactions to its implementation in both the negative and positive perspectives among students. Thus, this study is designed 'to determine the validity of those views to improve this latest venture into the realm of educational instruction. The researcher firmly believes that the extent of the use of the e-class as a tool of learning as in the case of De la Salle University-Dasmariñas enhances the satisfaction of students as it will arouse their interest in the lessons being discussed in the e-forum, therefore, catching their attention and thus, they will learn more efficiently while at the same time enjoying it. This research, thus, took interest to conduct a survey among students, specifically Political Science students, on the extent of the use of the e-class as a learning tool and to assess perspectives in its implementation to improve its viability. The understanding of these students' perspectives and needs (Chong et.al., 2016) is important to assess the effectiveness of internet-based delivery and thus, address these issues thoroughly by the institution's support services.

## **Background of the Study**

The e-class phenomenon is virtually new to the students of De la Salle University-Dasmariñas as it was only introduced approximately five years ago. Its first purpose was to supplement lessons in the classroom in what was termed as a web presence. Later, it was expanded to virtually cut teaching time into fifty percent in the classroom and the other fifty per cent in the school book. This was called the blended learning. E-class professors must of course, undergo training before they can go into e-learning.

This is necessary as teacher support (Fryer and Bovee, 2016) has a tremendous impact on the students' motivation to learn in this set-up. First, there is a basic course required for all those engaged in e-class and additional seminars for those who would like to adapt blended learning. A professor should be issued a third certificate which certifies his qualification to teach e-class in a blended setting and must also pass the annual evaluation by students on the quality of the education they received through the school book. This integration (Chang, 2016) of e-learning and face-to-face learning is to ensure that this process can stimulate the learners' interest, monitor their progress, provide them with feedbacks and guide them to expected goals. Some students took positively this new phenomenon in teaching while others are not so disposed to learning their lessons in an e-class in the school book. Thus, this study was conducted on a specific portion of the student populace, Political Science students. This segment contains one of the most vocal and cause-oriented students who are not afraid to share their views on any subject.

## **Statement of the Problem**

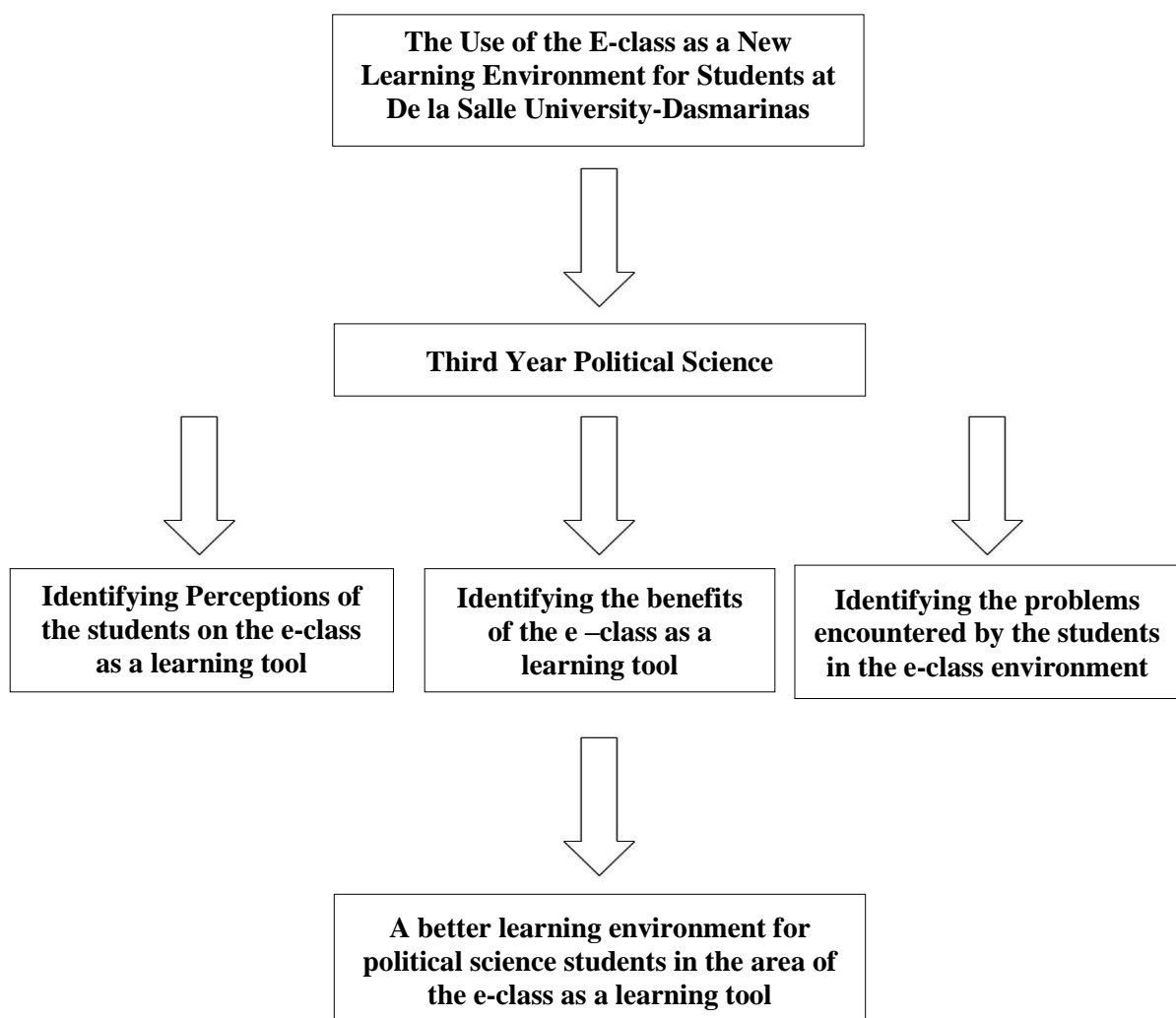
This research aims to bring to light perspectives on the use of the e-class as a learning tool for Political Science students at De la Salle University-Dasmariñas. The study aims to

answer the following questions: To what extent are DLSU-D Political Science students connected with the e-class as a learning tool? How do Political Science students perceive the use of the e-class as a learning tool? In what ways does using the e-class as a learning tool benefit said students? What are the problems encountered by the students in the use of the e-class?

## Scope and Limitation

This study focuses on the extent of the use of the e-class as a tool of learning for Political Science students only. It does not delve on the impact of the e-class on the performance of the students in their subjects nor does it show how they interact with the system. It is primarily conducted to improve the delivery of the e-class as a tool of learning.

## Research Framework



**Figure 1:** It shows the conceptual framework of the study.

## Methodology

**Research Design.** The study utilized the descriptive survey research design. Data were primarily gathered through the use of the questionnaire. Descriptive statistics (Clayton, 1984) was also employed by assigning numerical values to data collected to bring about significant differences in the perception of respondents. The descriptive method will be appropriate to the study and in gathering data since this will be centered on the use of the e-class as a learning tool for Political Science students at DLSU-D.

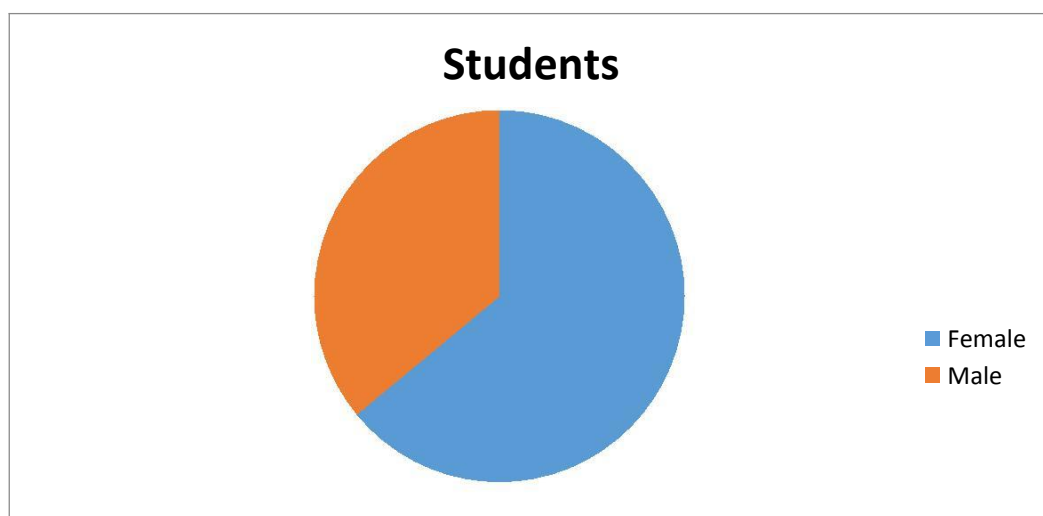
**Population and Respondents of the Study.** The study will involve the entire third year students taking up Political Science at De la Salle University-Dasmariñas in first semester school year 2015-2016. There are forty four respondents which answered the questionnaire.

**Research Instruments.** The study used a self made questionnaire in order to gather the data needed. The questionnaire is divided into four parts. The first part contained the background of the respondents, the second identifies their perceptions, the third contains the benefits while the last part pertains to the problems encountered.

**Statistical Treatment :** 1. Mean- to measure the tendency of the respondents' perceptions, the mean of the responses were computed by using the Likert Mean Formula (Runyon and Haber, 1991), as follows:  $\text{Mean} = \frac{fx}{N}$  where  $f$ =frequency of the responses,  $x$ =scale and  $N$ =total number of respondents. 2. Percentage- translating frequency into percentage was also used for comparison purposes. This was applied to the data gathered regarding the background of the respondents. The formula (Knoke and Bohrnstedt, 1991) used is as follows:  $\text{Percentage (\%)} = \frac{f}{N} \times 100$  where  $f$ =frequency of response and  $N$  is the total number of respondents.

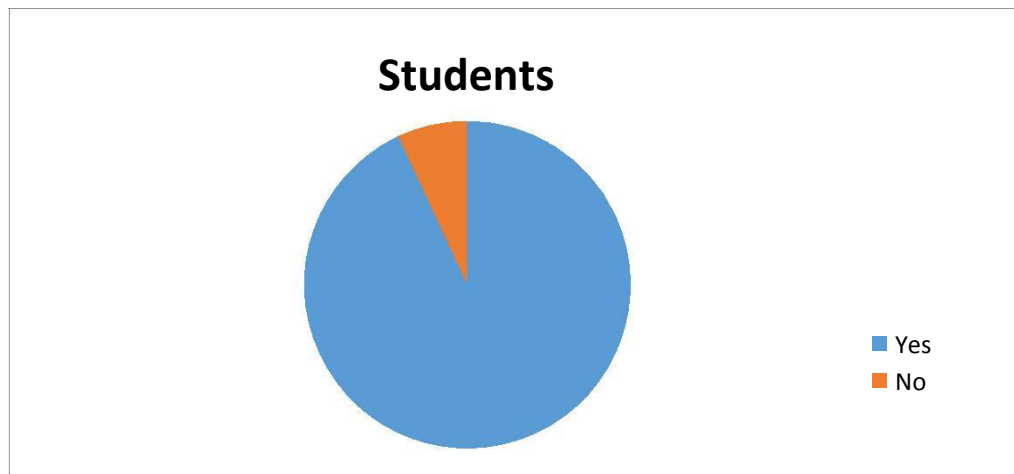
## Results and Discussion

The extent DLSU-D Political Science students are connected with the e-class as a learning tool.



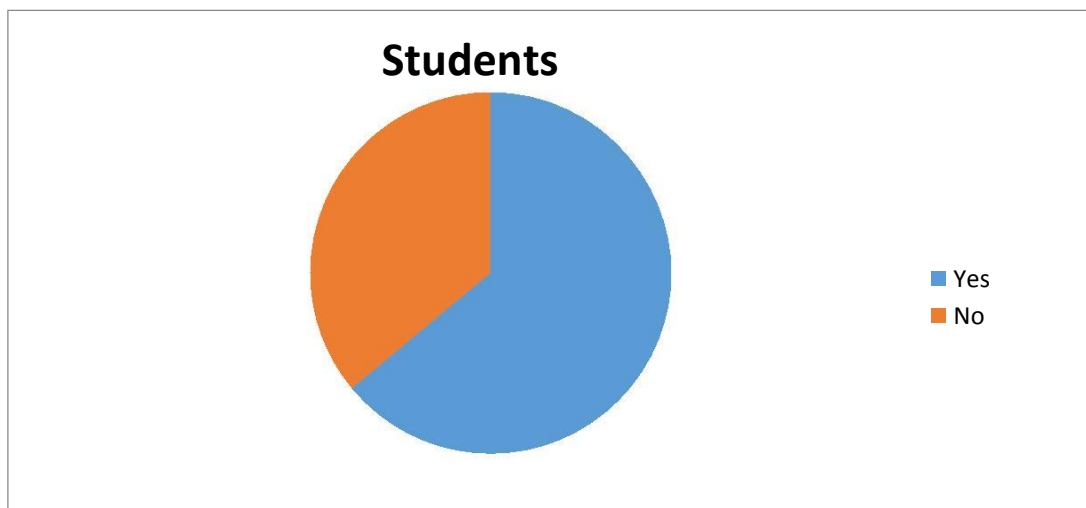
**Figure 2:** It shows the great disparity of male (36%) and female (64%) students taking up Political Science students at DLSU-D.

The results of the survey would indicate that of the 44 respondents in the study, 16 are males and 24 are females which indicates a new trend in the study of Political Science these days. Political Science, a pre-law course, was once dominated by males but nowadays females outnumber the males.



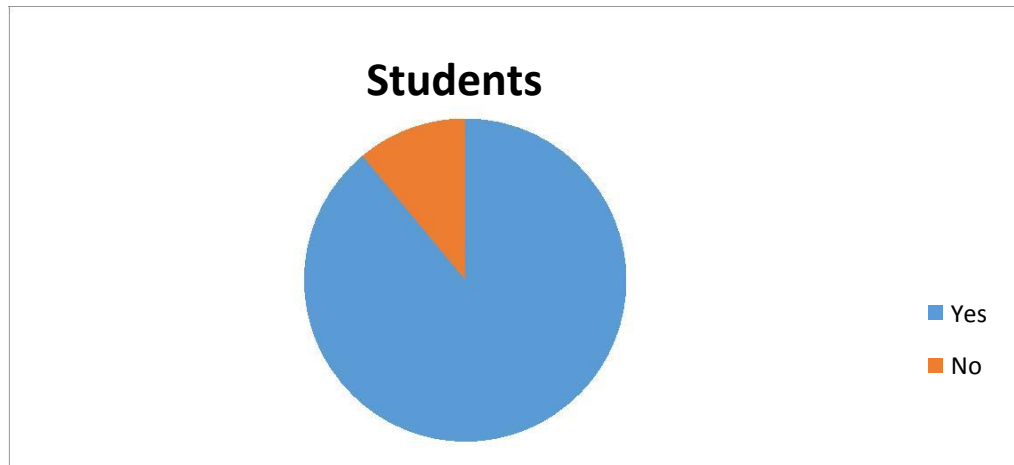
**Figure 3:** It shows the overwhelming usage of the e-class as a learning tool with 93% saying yes and only 7% answering no to the question.

This high percentage is due to the fact that many professors in DLSU-D are already adapting the e-class as a tool of educating their studentse. Thus, students have no recourse but to receiprocate. Nevertheless, satisfaction and usage (Aparicio, et.al., 2016) impact on the students' positive perception of the e-class.



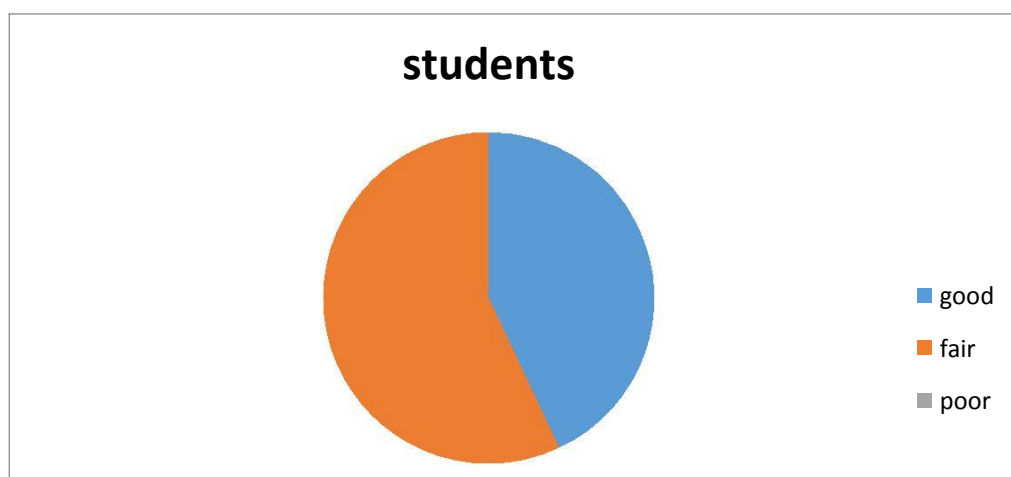
**Figure 4:** It shows that only 64% likes to use the e-class while 36% are not inclined to use it.

This can be attributed to the problems encountered by the students as they engaged in e-learning in the e-class. Many are still not fully convinced of its efficiency and effectiveness. In this regard, teachers (Oluwatumbi, 2015) need to be well instructed on the use of technology and the benefits of information technology resources in the teaching and learning structure.



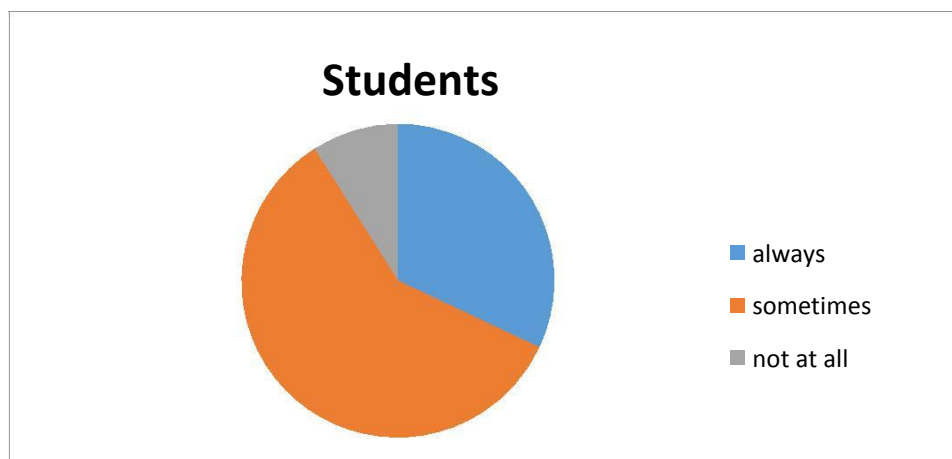
**Figure 5:** It shows that most students (89%) have internet access at home while only a few (11%) do not have.

This data is understandable as most of the students in DLSU-D are well-off and have the means to have all-day access to the internet. There are also quite a number of companies these days which provide cheaper and a more accessible internet service. Some students actually consider access to the internet a necessity in the face of today's reliance on e-technology.



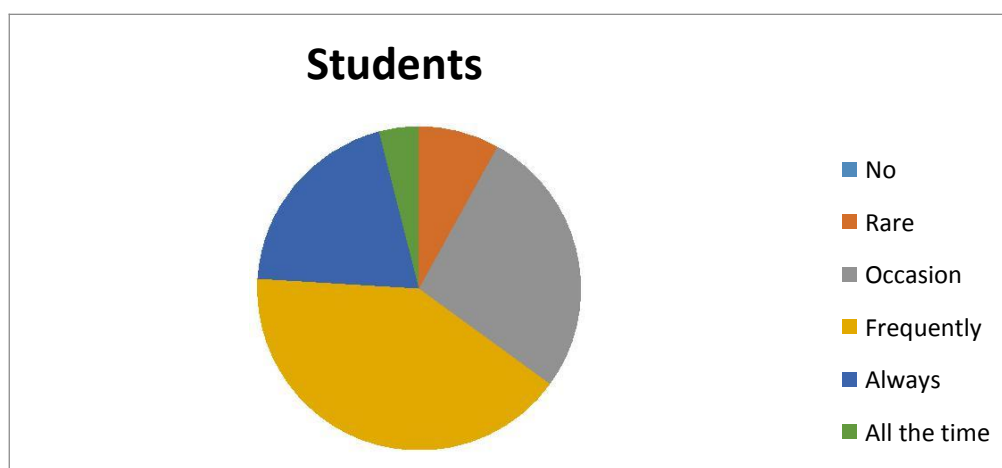
**Figure 6:** It shows that most students are knowledgeable (57%) about the e-class while 43% are quite good. No students were poor in this aspect.

Indeed, in this modern age, most of the youth are computer and internet literate which resulted in a high percentage of results. The e-class embedded in DLSU-D's school book is also user-friendly, that is why, it only requires minimal knowledge to operate its system and students can easily access its contents.



**Figure 7:** Shows that most students (59%) use e-class as a tool of learning, some (32%) always use it while only (9%) do not use it.

Those who always use it are of course students who avail of other services provided in the e-class such as chat and group-sharing. There is also growing recognition (Harrati, et.al. 2016) among institutions of e-learning as an integral and important part of education.



**Figure 8:** It shows that most students(41%) frequently visit the e-class, some (27%) occasionally, a few (20%) always visit while a trickle (8%) rarely visits. Very few (4%) use it all the time while no student (0%) said that they never visited the school book.

Many of the students are really frequent users because of the assessments to be answered, lessons that are embedded and some power point presentations that are downloaded. Many subject materials are also found in the school book.

#### Political Science students perception on the use of the e-class as a learning tool.

E-Class Perceptions as a Tool of Learning	Mean	Interpretation	Ranking
Using it makes access to relevant learning easier	3.7	Agree	Second (Tied)
It makes more effective use of classroom time	3.5	Neutral	Fifth (Tied)
Allows handling professors with different styles	3.4	Neutral	Eighth
Using it makes answering activities easier	3.8	Agree	First
Using it makes learning more effective	3.4	Neutral	Ninth
Using it increases my interest in the subject	3.3	Neutral	Tenth

<b>E-Class Perceptions as a Tool of Learning</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Ranking</b>
It increases quality of teaching and learning	3.2	Neutral	Eleventh (Tied)
I am hesitant to use features in school book	3.5	Neutral	Fifth (Tied)
It makes me more confident in answering tests	3.7	Agree	Second (Tied)
It limits my choices of learning materials	3.6	Agree	Fourth
It helps us gain knowledge outside of class	3.2	Neutral	Eleventh (Tied)
I can enhance its use to learn more effectively	3.5	neutral	Fifth (Tied)

**Table 1:** It shows how students respond to questions regarding the use of the e-class.

Most students agree that using the school books makes answering activities a lot easier as they have all the resources at their finger tips although there is a limitation as to finding learning materials. By this we can say that there is a positive attitude towards the e-class as reflected in their mean scores. Thus, we can conclude that the e-class is an important and vital tool of learning which can be applied nowadays. This attitude (Fatahi and Moradi, 2016) is of course, influenced by the personality and goals of the student.

### **The benefits of using the e-class as a learning tool**

<b>Benefits on the E-class as a Tool of Learning</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Rank</b>
It reinforces and expands contents learned	3.5	Neutral	1st
It increases motivation to learn new concepts	3.4	Neutral	7th
It allows adjustment to different teaching styles	3.4	Neutral	7th
It allows demonstration of other talents	3.5	Neutral	1st
It makes me more internet literate	3.5	Neutral	1st
It allows struggling students to practice	3.5	Neutral	1st
It changes the pace of classroom learning	3.5	Neutral	1st
It allows learning current events and news	3.5	Neutral	1st

**Table 2:** It shows how students perceive benefits of the e-class. And it seems that all respondents are not so interested as to the benefits of the e-class although one can notice that all the scores are almost on the level of Agree.

This is understandable, considering that students still view the e-class as an imposition rather than as a tool of learning. Some prefer the actual learning to happen in the classroom while others are not still familiar with the technology involved in e-learning. This passive attitude can also be traced to the students not really seeing it as a positive undertaking on the part of the institution to improve the delivery of instruction. The real culprit however, is the attitude and lack of skill on some professors whose e-class technique and strategies are boring and inefficient.

### **The problems encountered by the students in the use of the e-class.**

<b>Problems to use of E-learning in the E-class</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Rank</b>
Insufficient time to answer assessments	3.8	Agree	2nd
Poor technical and physical infrastructure	3.7	Agree	4th
Lack of computers	3.6	Agree	7th
Difficulty in finding suitable materials	4.0	Agree	1st
Insufficient technical knowledge	3.7	Agree	4th
Lack of guidance to gain skill and knowledge	3.8	Agree	2nd
Lack of interest on the part of students	3.7	Agree	4th
Insufficiency of financial resources	3.6	Agree	7th

Lack of support from administration	3.6	Agree	7th
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**Table 3:** It shows the problems encountered by the students in using the e-class as a tool of learning.

While most students are in agreement that problems persist in its implementation, garnering the highest points are the difficulty in finding suitable materials, insufficient time and lack of guidance. In this regard, professors can really help by being considerate to the needs of students, giving them ample time, guiding them as to the materials to be used and educating them about the features of the e-class. The lack of interest by some students reflects the need for innovation to make more challenging and exciting activities. Such internet-based learning (Dongsong et.al., 2004) reflects the growing and ever-encroaching demand for a variety of ways of delivering e-education. The poor technical infrastructure is an indication of the students' frustration as to the availability of computers in the library and the inconvenience of having to find an internet cafe. Indeed, there are still kinks to be solved and this is just normal in the introduction of a new educational setting. Other problems posed by the students are: The lack of notice that there are assessments to be answered, poor internet connection in their homes, some major activities are not graded, decrease in attempts even if cause by internet interruptions, noise in computer shops and lack of internet at home, thus, they cannot do late night assessments.

## Conclusions and Recommendations

The use of the e-class as a tool of learning is now being utilized by Political Science Students as a major source of knowledge and education. This is attributed to the latest university policy to make use of technology to improve subject delivery. Students likewise, demonstrate a positive attitude towards this new learning method as most of them have internet access. While many are undecided, some students view the e-class as a positive undertaking. These doubts are anchored on the poor technical knowledge of professors, lack of adequate techniques and inadequate physical infrastructure. And yet it is undeniable that e-tech improves practical application and better course understanding (Yanuschik, et.al., 2015). All students have a passive attitude towards the benefits of e-learning although they are in the borderline of agreement. This illustrates that students are not yet totally convinced as to the viability of the e-class as a learning tool. While this is not a positive sign, this provides a signal to administrators and faculty alike to further improve the intricacies of the e-class for the students to fully embrace its implementation. All the students agreed that there are problems in the implementation of the e-class as a tool of learning. This is understandable as this is true in all new undertakings but over time these failings can be assessed and addressed for a smooth and flawless process to be implemented.

Thus, it is recommended that the problems mentioned in the study be addressed by De la Salle University-Dasmariñas to make the e-class a more effective tool of learning. These cannot be left unresolved as the success of this endeavor hinges on learner satisfaction and system efficiency. On a positive note, these problems can be remedied and neutralized. More trainings must be conducted for professors to be more effective facilitators of e-learning. New methodologies and techniques must be introduced constantly to the concerned faculty to further improved content delivery. Aside from the trio of mandatory trainings, the faculty must also undergo specialized seminars to give them an edge in the holding of e-classes. Students should be given different motivations to make the e-class more exciting. These motivations can be in the form of grade incentives, creative strategies or exciting academic rewards. A professor has

in fact introduced gaming as an instrument for students to immediately answer the e-class assessments. Semestral evaluations have also been conducted to weed out ineffective facilitators. More studies can also be conducted to make the e-class a truly meaningful experience for students of DLSU-D. Indeed, this study can be considered as only a tip of the iceberg when it comes to addressing the issues on the e-class as an effective tool of learning. More in-depth researches will totally eliminate the hitches and glitches associated with e-learning.

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# Using Web 2.0 Tools To Enhance Learning in an Industry-Based Programme

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## Abstract

As the approaches to engage students evolve rapidly with new technologies that can be used to enhance the learning experience, traditional but proven methods of pedagogy are often found lacking in creating a higher level of engagement with students. At one of the teaching hospitals in Singapore, a study was undertaken to integrate technologies to the learning experience of candidates enrolled in one of the courses that aims to promote lifelong learning through the transfer of critical-thinking and evidence-based knowledge and skills. The profiles of candidates are trained professionals who have not been in the profession for some time and the course seeks to re-engage and prepare them on getting back to the profession, with up-to-date knowledge on the relevant theories and concepts. Engagements with these candidates are a big challenge, especially during their attachment periods to across different hospitals and healthcare institutions. The use of the Substitution, Augmentation, Modification, and Redefinition (SAMR) model, coupled with Bloom's taxonomy and the Technological Pedagogical Content Knowledge (TPACK) Framework are the main theoretical underpinnings used by the authors to drive the development of the course's pedagogy to engage students professionally through Web 2.0 tools. Data is collected from end of programme evaluation and information shared in the online social network platform. Feedback from candidates reports positive experience with these learning initiatives.

**Keywords:** Professional Learning, Learning Technologies, Learning Engagements, SAMR Model, TPACK Framework

## Introduction

With the evolution of the Web from a simple 'readable' Web 1.0 to 'readable and writable' Web 2.0, learners' role have become more active, interactive and collaborative (Noe, 2010; Turban, King, Lee, Liang and Turban, 2012). This has also catalyzed the evolution of the e-learning from passive to active participatory learning (Hussain, 2013).

Thus, this paper seeks to review the impact of learning and teaching experience on the use of Web 2.0 tools in an industry-based programme (IBP) to achieve the intended learning outcomes. Upon completion, learners should be able to (1) utilise critical-thinking and evidence-based practice to guide their practice in the dynamic world, and; (2) embark on life-long learning throughout their professional career. In the next section, the main theories will be discussed. This will be followed by the introduction of the case context where the applied blended delivery technologies and their impacts are discussed. Finally, the paper conclusions will be drawn and possible directions for future research will be provided.

## **Literature Reviews**

### **The Technological Evolution**

E-learning originally meant ‘electronic learning’ - delivering training or education through technologies and with a pedagogical emphasis (Blanchard & Thacker, 2010; Noe, 2010; Turban et al., 2012). Hence, e-learning aims to integrate technologies to enhance the learning and teaching experience (Mason & Rennie, 2006; JISC, n.d.). With the evolvement of mobile technology, smartphones and other handheld mobile devices have penetrated our life, providing opportunities to mobile learning (m-learning). This in turn brings e-learning to a new phase by being significantly more integrated to one’s life, enabling learning to happen anyplace, anytime (Kukulka-Hulme & Traxler, 2005). The essence of e-learning is not a mere technological substitution or add-on. It is not for the sake of using technologies, but for enhancing learning experience with thoughtful pedagogical strategies. Educators should therefore take up an active role in the design of the curriculum to integrate and evaluate the use of technology with pedagogical emphasis (Chelliah & Clarke, 2011; Harris, Mishra & Koehler, 2009).

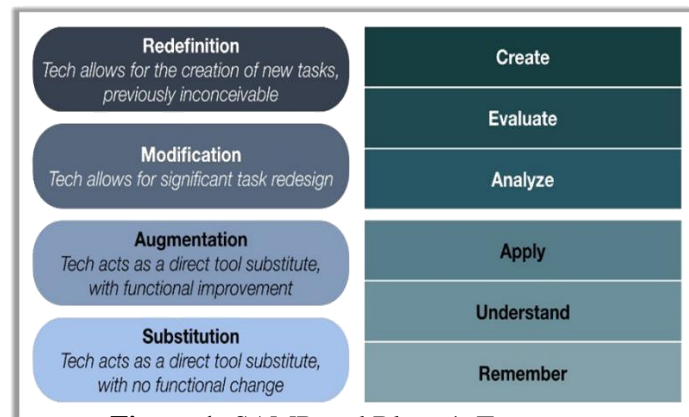
When e-learning is applied appropriately, it empowers learner in their own learning and shape one’s attitude towards self-directed learning by handing the autonomy and control back to learners. This positive influence can go beyond the training period as the prolong awareness and ability to practise self-directed learning can foster lifelong learning (Inoue, 2009). This is especially important in professional education where mobile-learning (m-learning), that is learning via mobile devices as the learning platform, can be used as part of e-learning. E-learning with a social constructivism approach allows the bridging of the zone of proximal development (ZPD) and the overcoming of issues brought by different locations (FAO, 2011; Holmes & Gardner, 2006). Flipped classroom with online asynchronous discussion can address the diverse learning needs and prior experience, promoting the culture of using discussion board to broaden learners’ exposure through sharing of learning experience, critical thinking and inquiry-based learning. These are significant strengths of the approach that can be used to enhance the learning experience.

The introduction of collaborative online learning tools not only help learners comprehend the intended subject matters, but can also provide long-term benefits like improving their IT literacy to start the journey towards digital fluency, foster active-learning and lifelong-learning. As a result, this further prepares learners to adapt to their future role within the healthcare system through employability skills gained (Wang, Myers & Sundaram, 2013). Although the general assumption is that digital immigrants tend to resist technology or have difficulty in accepting, many researchers disagree with this notion, further arguing that nativity is actually a continuum that is dependent upon the users’ experience (DeVore, Price & Natzke, 2007; Vodanovich, Sundaram & Myers, 2010; Wang et al., 2013). Therefore, early exposure with guidance to the use of IT systems can provide substantial advantages to the IBP learners.

### **The SAMR model and TPACK Framework**

The SAMR model and Technological Pedagogical Content Knowledge (TPACK) Framework are the main theoretical underpinnings for the development of e-learning for the IBP. Besides technology integration, SAMR model (Figure 1) can also focus on pedagogical engagement by coupling SAMR with Bloom’s taxonomy (Puentedura, 2014a, 2014b). While

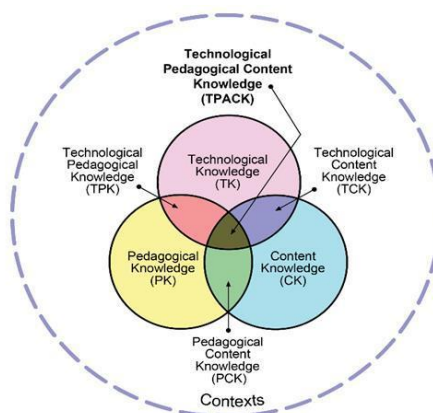
moving technology integration up the SAMR model, educators should consider the pedagogical rationales and attempt to shape learning towards a higher-order thinking (Puentedura, 2014a).



**Figure 1: SAMR and Bloom's Taxonomy**

Source: Puentedura R.R., (2014), Reprinted from Common Sense Graphite, <http://www.graphite.org/blog/samr-and-blooms-taxonomy-assembling-the-puzzle>

The TPACK Framework (Figure 2), on the other hand, addresses the nature of knowledge required by educators in effective teaching and learning with technology, and providing guidance in successful technology integration (Koehler, Mishra & Cain, 2013). The 3 core bodies of knowledge that educators should possess are technology, pedagogy and content. Their intersections: Technological Pedagogical Knowledge, Technological Content Knowledge and Pedagogical Content Knowledge, represent the educator's continuing integration effort of pairing the 2 relevant constructs in the education context, to seek "a dynamic equilibrium" (Koehler et al., 2013, p.17). Since any two of the core constructs are reciprocally related, any changes in technologies development, content changes from evidence-based practice or pedagogical emphasis, will lead to a different "best possible" solution (Koehler et al., 2013). Hence, technology integration requires on-going effort. Using SAMR and TPACK as a guide, a series of technology applications are integrated into the IBP.



**Figure 2: TPACK Framework**

Source: Koehler, M. (2012), Reprinted from TPACK.org, <http://tpack.org>

## Background of the Case

This Industry-Based Programme (IBP) was first set up in 2013 under a co-initiative between the Singapore Ministry of Health and the Workforce Development Agency. It targets ex-professionals who have not been practising for 5 years or more and aims to facilitate their return to the industry with a 3-month re-training course. The accredited curriculum uses traditional teaching methodologies: lectures, workshops, face-to-face discussions, simulation and supervised practice in clinical attachment. The 3-month course comprises of 1-month classroom training and 2-month attachment at various clinical settings.

Statistics released by the Info-communications Development Authority of Singapore (2014) reported household access to internet at 88% (2014); smartphone penetration at 88% (2012) with relatively consistent distribution amongst different age groups, including older netizens. These greatly support the initiative of digitalising certain segments of the syllabus for e-learning. However, as with the case of the participants of the IBP, they have not been active in the workplace and most of them had been housewives for the past years. As such, most were unfamiliar with the latest development in IT trends.

The following challenges are identified from the first 2 intakes:

- Wide age range (27 to 54 year-old) with diverse prior experiences and some did not practise for 15-20 years. This reflects diverse learning needs and possibly different learning styles.
- During clinical attachments, small groups rotate to various clinical settings and guided by assigned Clinical Instructor for supervision and feedback. As learning opportunities are often random and inconsistent, if cross-group sharing possible, then it can broaden learners' exposure, encourage peer-learning and stimulate critical-thinking. However, it is not feasible with the traditional methods due to distance.
- The use of information technology (IT) in the current Singapore healthcare system is well-established and entrenched, from patient management to nursing manpower management. For IBP learners, the use of IT systems is viewed as one of the major challenges, due to poor digital literacy, together with the fear of returning to work.

To mitigate the above challenges, blended learning is proposed.

## Applications of Selected Blended Technologies and their Impacts

### Edmodo

Edmodo is chosen as the virtual learning environment. It is a powerful online platform that allows the sharing of content, quiz and assignment distributions, and the management of communication at a single place. Its mobile apps are essential to enable m-learning. Online collaboration tools like Google Slides are also chosen. These choices are made with the considerations of user-friendliness and safe privacy settings (Davis, 2013).

Before course commencement, a teacher account is set up to acquire the group code for student enrolment. Briefing slides on how to register a student account are prepared. On the first day of class, learners are briefed on the registration/usage of Edmodo, given time to register student accounts and enrol to the group. Mobile apps are also installed on learners' mobile device(s). These preparations are necessary to ensure learners are ready to embark on this learning journey by alleviating their fear of doing something unfamiliar. While basic for people who have acquired digital fluency, it is nonetheless, an essential building block for these

learners to embark on e-learning. As access to Edmodo class is protected, it ensures privacy and provides a sense of belonging to a community, effectively moderating the feeling of fighting the battle alone (Shackelford & Maxwell, 2012).

### Asynchronous Discussions

Enhancing learning with asynchronous discussion is supported by the Community of Inquiry Model (CoI) (Garrison, Anderson and Archer's, 2000). In order for learners to be comfortable with this online learning environment, educator's facilitation is important to orientate the digital immigrants, including starting a conversation, sharing of useful information/materials and facilitating inquiries. This is evident from the transition of educator-initiated threads to learner-initiated threads from week 3 (Figure 3). It demonstrated that learners have assumed the responsibility to construct meaning in their own learning and appreciate the use of the discussion board (Garrison, 2011).

From the implementation of discussion board, some useful strategies are observed for building a community of learners:

- Start with educator-initiated posts; slowly induct learners to the community
- Encourage learners' participation by
  - Allowing informal input, especially at the beginning
  - Providing sufficient time for learners to answer
  - Using badges as rewards to build their confidence in online learning
- Share class photographs that capture learning moments to promote bonding

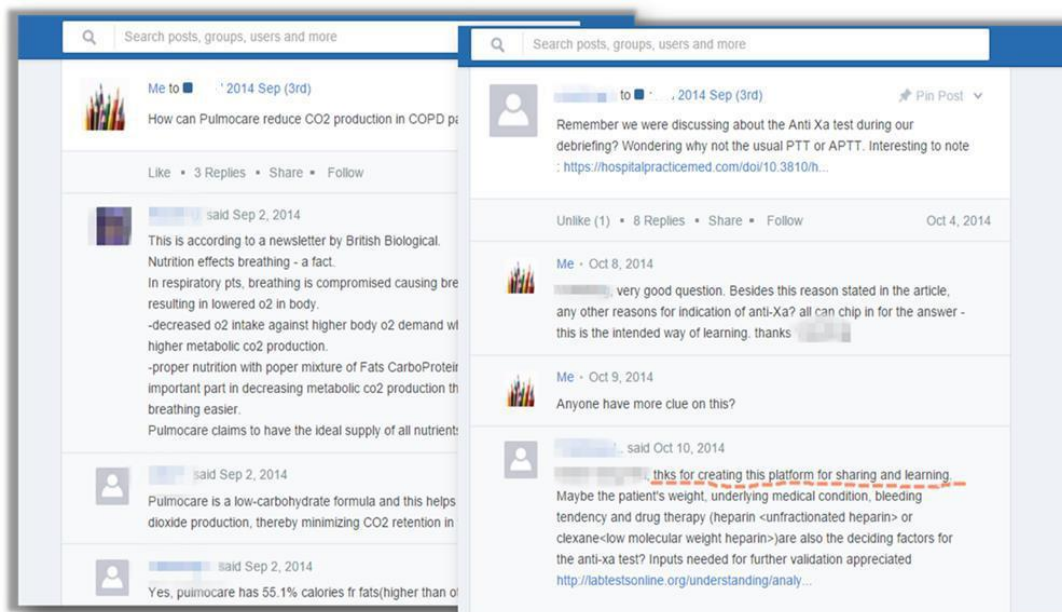


Figure 3. Screenshot of Edmodo discussion board. Screenshot by H. W. Wang (2016).

(Left: educator-initiated thread at the beginning of the course; Right: learner-initiated thread)

### Figure 3: Screenshot of the Discussion Board

Overall, the integration of the discussion board has served its purpose to overcome the original challenges whereby cross-group sharing are not possible due to different locations. This resulted in substantial improvements by allowing sharing of learners' unique experience, maximising their exposure and learning while they are at different locations during practicum. This supportive learning community in return motivates and encourages sharing of

thoughts/feelings, hence, stimulating critical thinking and reflective practice (Bye, Smith & Rallis, 2009).

### **Google slides for collaborative learning - a flipped class**

This is one of the workshops using flipped classroom, where students go through online materials for learning and self-assessments before the actual physical class takes place, while in-class time is devoted to discussions. The learning outcome of this workshop is to have learners remove sutures or staples competently and confidently. Achieving skill competency is the priority within the 2-hour class. As learners have various level of prior knowledge on this topic, flipped classroom forces the learner to pick up the necessary threshold knowledge independently outside the classroom, albeit at their preferred pace. Using collaborative learning, learners can maximise their own and each other's learning at their level. Hence, classroom hours can focus on the ZPD - critical thinking and competency.

Communicating the objectives and expectations is crucial to properly introduce the learning plan and activities to learners. Two weeks prior to the actual class, a template of guided discussion via Google slides is made ready and a face-to-face task briefing is provided. A group of 4 learners are expected to:

1. Research on the given questions and share their opinions with comments.
2. Analyse and evaluate/validate other inputs (this process elicits questions and trigger critical thinking, further research and problem-solving).
3. Complete Google Slides with validated answers.
4. Present the topic in class for further discussion/validation.

The advantages of using Google slides as a discussion platform are:

- Real-time collaboration tool allowing multi-media to enhance understanding and facilitate performance of skills

Discussion content are easy to organise and archive, with latest updates that can be made on the slides for review at a later time

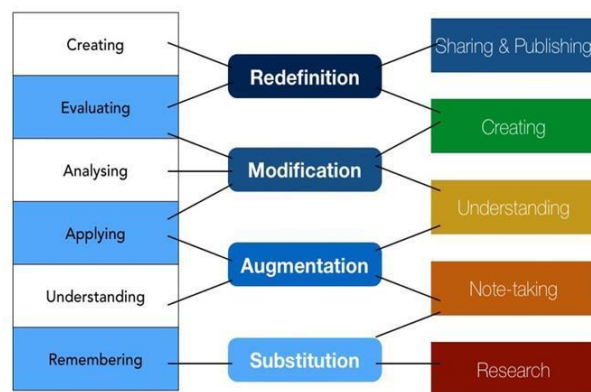
### **Evaluation of the Approach**

With this approach, learning is enhanced by extending its boundary beyond the curriculum, physical classroom and limited contact hours, leading to more spontaneous and comprehensive learning. From the educator's perspective, the overall implementation of this e-learning resource is successful; learners generally adapted well to this learning approach and met the intended learning outcomes.

To evaluate the impact of the approach, learners' feedback on their experience is a significant determinant. According to the topical evaluation and the final programme evaluation, the feedback is positive with an overall rating of 5/5, where 1 stands for poor to a 5 for excellent. Also, a follow-up evaluation is made 1 year after the course, with the intention to evaluate the use of technology. The survey findings showed:

- ☐ Learners giving 100% positive feedback as it helped communications and provided a fun element while learning
- ☐ 75% of the learners believe that the benefits of using technology in the course went beyond the course duration

This is a clear indicator that learners appreciate the use of e-learning in this course. This pedagogical approach is summarised in Figure 4.



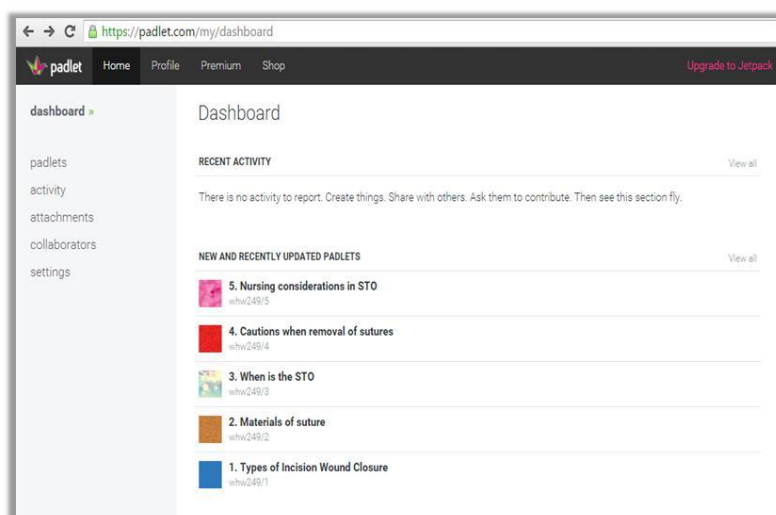
**Figure 4: Pedagogical Approach for STO Workshop**

Source: Upfold, A. (2015), Reprinted from Ed Tech Today, <http://edtechtoday.net>.

## Conclusion

Some observations are made on the use of Google Slides as a discussion platform: learners felt uncomfortable to share a different opinion to those already on the slides, especially if these are from another learner. Upon reflection, the identified causes and possible solutions are: The intended use for Google Slides is presentation of information. Learner may have misconception that this is a presentation to be done by group, as long as the answers are up.

To rectify this, the authors believe that expectations of using Google Slides as a variation of discussion board must be clearly communicated and highlighted; alternatively, to use Google Slides in conjunction with a different multimedia discussion platform, Padlet. Each discussion agenda can be created as a Padlet discussion board (Figure 5). Validated answers from Padlet then to be presented into Google Slides. In addition, the teacher can, by using the rule of mandatory participation, to encourage contribution in discussion board. This can encourage the sharing of ideas and effectively eliminate the common pitfall that participation in the discussion is by the dominant few (Wilson & Fairchild, 2011).



**Figure 5: Possible improvement - Padlet board**

The paper has discussed on how technologies can be blended into professional learning, through the use of SAMR and TPACK as the main theoretical underpinnings. This therefore widens the understanding on how SAMR and TPACK can guide the implementations of blended technologies to non-school based programmes, thus also opening the possibilities for managers to consider such approaches to improve the learning and teaching experience in

industry-based programmes. While the benefits are clearly articulated in the paper, there are also suggestions on further improvements. As such, the effort to integrate technology will not end here. The improvement effort through SAMR and TPACK is an on-going quest.

One possible direction for future research is to further explore the benefits of using technologies in professional learning from the perspective of the CoI model, by looking at the cognitive, social and teacher presence (Garrison, 2011). It is also in the view of authors that further research can be done on the perceived benefits of the participants between digital immigrants and digital natives.

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# **Electronic Document Management System to Support Accreditation**

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## **Abstract**

This study is about the use of open source electronic document management system to support the accreditation(EDMSA). The system was pilot tested at Information Technology Department of Bukidnon State University. This paper investigated the problems encountered in the preparation for accreditation through survey questionnaire and interview. A system analysis and design was conducted to find a solution to solve the problems. An open source document management system(OpenKM) was installed and the profiles of the users, taxonomy and categories were configured according to the accreditation needs of the university. An operational manual for the Accreditation Team working force and for the Accreditors was developed and used in the training of the users of EDMSA. And finally a post pilot implementation test was given to the users of the system to evaluate the functionality, effectiveness and usability of EDMSA. The overall rating of 4.66 by the users evaluation and a rating of 4.47 by the internal accreditors evaluation and also the mapping of the problems encountered during the preparation for accreditation, the evaluation question and results shows a high rating which implied that the EDMSA addressed the problems in the retrieval of documents from different offices, replication of documents, giving feedback to the documents prepared and monitoring of the status in the preparation for program accreditation.

**Keywords:** Accreditation, Electronic Document Management System, OpenKM

## **Introduction**

Accreditation is an important part of the higher education system today. Accreditation is a means of assuring high quality education through self evaluation and peer review based on the standards set by the accrediting agency which are beyond the minimum requirements prescribed by Commission on Higher Education (CHED). Having an accredited status gives an institution prestige and benefits to all the stakeholders. With facilities, library, laboratories, services and teachers of adequate quantity and high quality, the institution can produce graduates of higher level of competence at par with what the industries need (Oladipo et al,2010), thus, making the parents confident that their children will have greater chances of employment. However, to have an accredited status the institution must prepare materials and documents to demonstrate their accomplishments and exhibit the level of quality it possesses in its operation. Traditionally,

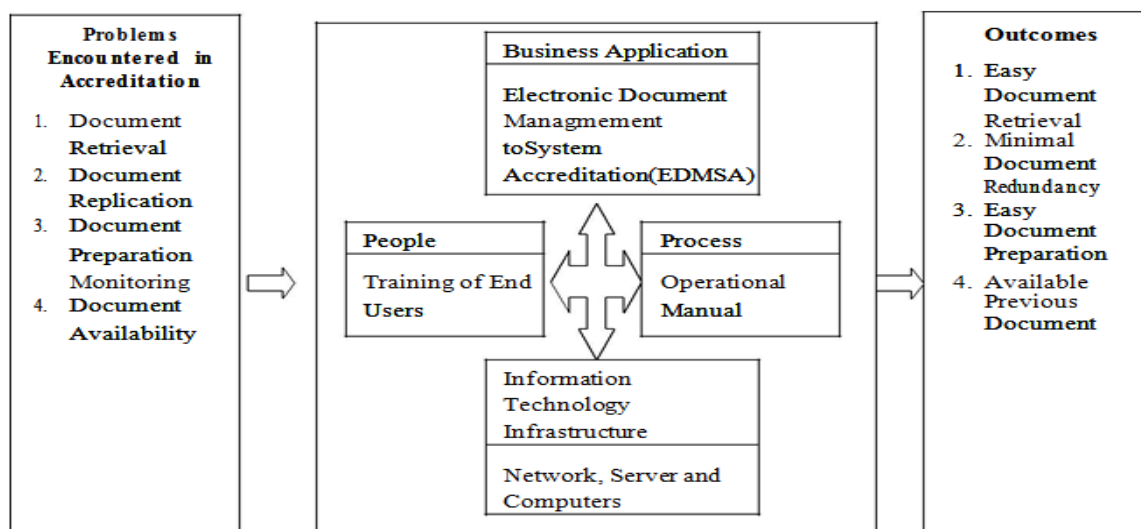
institutions have an accreditation room, containing all the paper documents in multiple copies illustrating their compliance to the standards of the accrediting agency. This activity entails redundancy of paper documents and takes a lot of time and effort in the process of its collection from the various units and offices of the institution aside from the laborious preparation being done to make all documents ready for accreditation presentation. As technology being ubiquitous, it is but fitting to use technology in the accreditation activities. Accreditors could have 'random access' to information they need at a touch rather than having to rummage through voluminous paper information. Cherif (2011) mentioned that computational science and technology can be applied in accreditation process enhancement to address the issue of heavy paperwork during the accreditation activities. In the Philippines to go through the process of accreditation on the part of the institution is voluntary. Federation of Accrediting Agencies in the Philippines (FAAP) is the umbrella organization which is authorized by CHED to certify the accredited status of programs granted by the four (4) accrediting agencies namely, The Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA), Philippine Accrediting Association of Schools, Colleges and Universities (PAASCU), Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP) and, Association of Christian Schools and Colleges Accrediting Agency (ACSC-AA) (Arcelo, 2003). Each of these accrediting agencies has its own standard or criteria in evaluating the different program areas of a certain institution or university to be accredited.

In Bukidnon State University (BSU) the handling of most of the documents needed in the accreditation is done manually. For every program that undergoes accreditation, a working committee or accreditation team is created. It is composed of 10 groups assigned to work on a specific area of the standard set by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP). Each group has an area chairperson assigned to oversee the accreditation preparation activities. A brainstorming activity is conducted by each group to come up with a list of necessary documents needed to support the claim of the University in each of the item in the accreditation survey instrument. These documents which are found in the different departments and units of the university must be gathered, collected and properly labeled for presentation. From the preliminary interview and survey conducted by the proponent, the problems encountered by the working committee during the accreditation preparation were identified. One of the problems identified is the retrieval of the documents. Many times, area members find difficulties in retrieving the documents from the different units. There is also a problem in document redundancy. Some items of the survey instrument require the same document attachment so a reproduction of the same document is necessary. Since each program has a separate preparation, more reproduction of documents is done for the areas that are common to the different programs. It is important for the area chairman to monitor the status of document collection and preparation to be able to have all the documents intact and ready for internal accreditation. From the result of the survey conducted, it shows that some area chairpersons experience difficulties in the monitoring of the status of document collection and

preparation. This sometimes leads to cramming towards the end of the accreditation preparation. Since accreditation is a cycle, after many years of having been accredited, the university will again go through another accreditation process aiming to gain another level of accreditation. In this situation, the working committee has to re-examine the documents they had prepared in the previous accreditation. However, in many instances some of the documents are not available anymore.

## Developmental Framework

The development framework for this study is based on Cassidy model of Information System Planning & Implementation which involves four (4) areas: the business application, information technology infrastructure, process and people (Cassidy, 2006). The Electronic Document Management System for Accreditation Developmental Framework in Figure 1 shows the problems encountered during the accreditation preparation as input on how to implement Cassidy model of Information System Planning & Implementation. For the business application an electronic document management system is used to support the accreditation process. Information Technology Infrastructure must be in place for the system to work. It is necessary that appropriate server, computer and network specification must be used. The process must not be ambiguous so an operational manual based on the system can be prepared. The operational manual guides the end user in manipulating the system. Despite the availability of the operational manual, still the end user (people) needs to be trained formally on how to use the system. This is to ensure that the end users are comfortable with the new system. As Kendall (2002) stated, training is one vital aspect for successful system deployment.



**Figure 1:** An Electronic Document Management System for Accreditation Developmental Framework

## Research Methodology

The study used a deployment and customization of an electronic document management system using a free open source software. The problems encountered during the preparation for accreditation of Bukidnon State University was analyzed and an electronic document management system was designed and implemented as a solution to the problems encountered. The development framework is based on the model described by Cassidy's (2006) model of Information System, Planning & Implementation. There are four(4) stages in the system customization; data gathering, system analysis and design, implementation and evaluation.

Data gathering is done through a personal interview with the Area chairpersons and survey questionnaire distributed to the different Area Chairperson and Area Members of various programs which had already gone through accreditation visit last December 2009. The questions asked were semi-structured questions for the purpose of acquiring the different data needed, and the standard processes of accreditation preparation. The questions also covered the problems encountered during the accreditation preparation. In the system analysis and design, Unified Modeling Language (UML) Use Case diagram was utilized to define the different processes involve in the utilization of the system under study. To show the relationship/interaction between a process and the actor responsible for a particular process, a process flowchart with swim lane diagram was created. For the Implementation stage OpenKM which is an available open source electronic document management system was installed in a Windows based server. It was configured according to the accreditation needs of the university. Profiles were created like Accreditors, Area Member and Area Chairperson. Each of these profiles were assigned with appropriate privileges. And also taxonomy of documents were created to support the AACUP standard. An operational manual was developed and was used during the conduct of training of all the users of the system. The system was then pilot tested in preparation for the accreditation of BS Information Technology. And for the evaluation A Post pilot implementation test which is an adaptation of Alshish (2010) evaluation questionnaire was given to all users of the electronic document management system to support the accreditation of Bukidnon State University – Information Technology Department. The proponent used a simple feedback questionnaire to measure the effectiveness of the system. This feedback questionnaire contains questions related to the functionality, effectiveness, and usability of the system. To enrich the data for evaluation an interview is also conducted to the same respondents. The data gathered in the evaluation phase is processed and descriptive analysis of the result is utilized.

## Presentation, Analysis, and Presentation of Data

### Requirements Gathering Phase

During the preparation of the documents several problems were encountered by the accreditation team. Table 1 shows the result of the survey questionnaire on the problems encountered by the accreditation team during the process of preparation and gathering of the supporting documents. These survey questionnaires were given to the eight (8) Area Heads and ten (10) Area Members from the various programs being accredited which had already gone through an accreditation visit last December 2009

**Table 1:** The Problems Encountered During the Preparation of Documents for Accreditation

<b>The Problems encountered during the preparation of documents for accreditation</b>	<b>Area Head Frequency Ratings</b>	<b>Area Members Frequency Ratings</b>
Single document is replicated to support different items in different areas of the AACUP instrument	100%	70%
Difficulty in retrieving the data from other offices	75%	60%
Difficulty in the reproduction of documents	50%	30%
Documents from previous accreditation are not preserved	44.44%	20%
No automatic feedback from the internal experts/ Area head of the documents prepared by the area member.	33.33%	40%
Difficult for the Area Head and AACUP coordinators to monitor the status of document preparation.	27.78%	10%

Table 1 shows that hundred percent (100%) of the respondents in Area Head group and seventy percent(70%) of the respondents in the Area member group found the replication of a single document to support different items in different areas of the AACUP instrument as one of the problems they had encountered . Seventy five percent (75%) of the Area head group and sixty percent (60%) of the area member group mentioned that the retrieval of the documents from different offices was another process that they found difficult. Among the respondents in the Area head group fifty percent (50%) identified high cost of document reproduction as

another problem and also 62.5% of the respondents said that they had a difficulty in monitoring the status of document preparation. Another obstacle that the fifty percent (50%) of the Area head group stumbled into was the lack of automatic feedback from the internal experts regarding the documents prepared. Accreditation team was not able to receive automatic feedback from the internal experts or Area Head of the documents. And 37.5% of the respondents said that documents from previous accreditation were not preserved. On the other hand the forty percent (40%) of the respondents from the Area Members group found no automatic feedback from the area head regarding the documents prepared as another problem encountered.. Both the Area head and Area members had the same result except for the problem. Documents from previous accreditation are not preserved in which more Area Head found it a problem compared to the Area members. This result is probably due to a fact that all of the Area head are members of the previous accreditation team and some of the Area members are new to the accreditation team who have not experienced yet that particular problem

## **Analysis and Design**

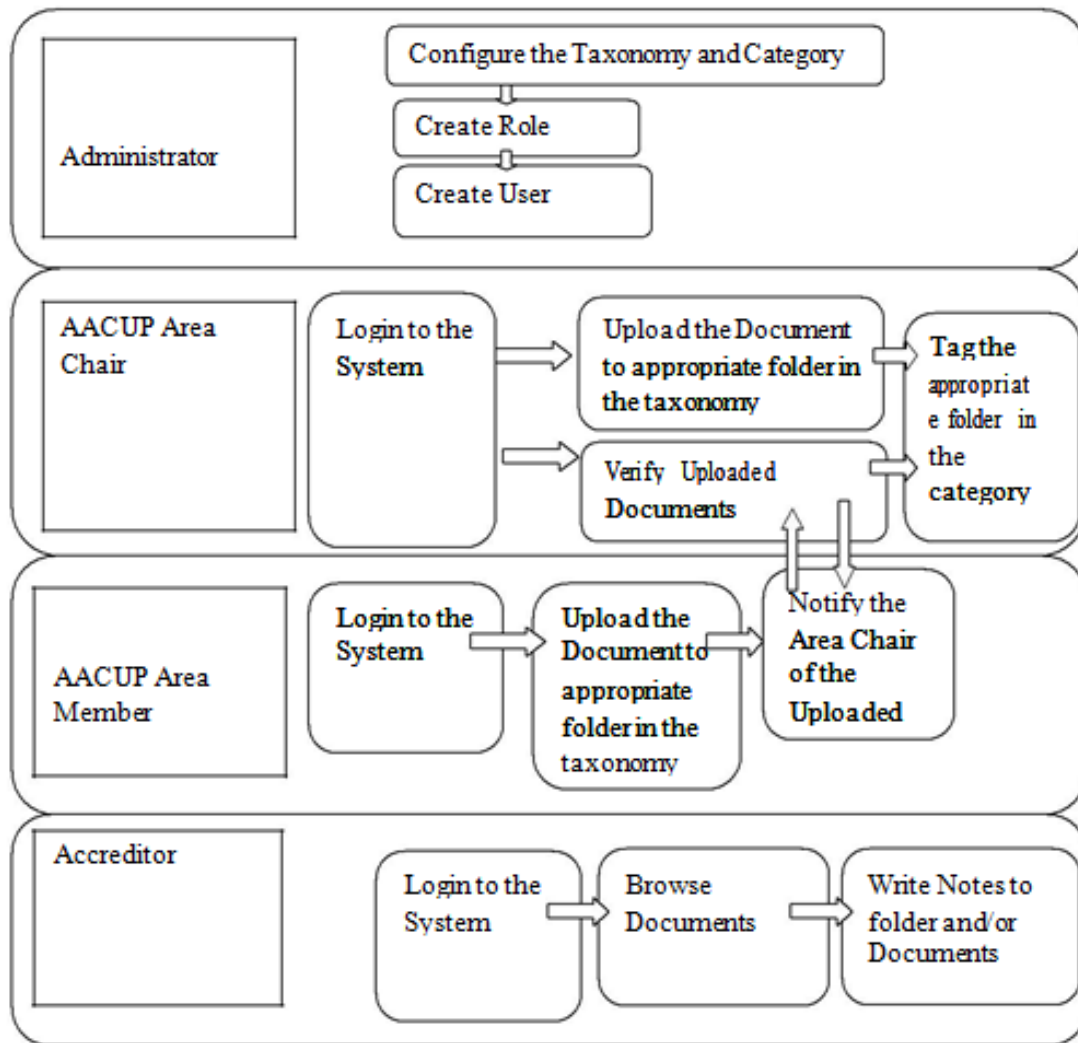
The problems encountered during the preparation of documents for accreditation lead to the consideration of using Open KM software to implement the electronic document management system to support the accreditation. Open KM is a web-based document management application. Table 2 shows the mapping of the problems encountered during the preparation of documents for accreditation and the corresponding Open KM software feature that may address the problem.

**Table 2:** Mapping of the Problems, and Open KM Feature

<b>The Problems encountered during the preparation of documents for accreditation</b>	<b>Open KM feature</b>
Single document is replicated to support different items in different areas of the AACUP instrument.	Open KM allows tagging of documents to multiple categories
Difficulty in retrieving the data from other offices	Open KM allows direct upload of documents from different offices
Difficulty in the reproduction of documents	Open KM allows tagging of documents to multiple categories
Documents from previous accreditation are not preserved	<input type="checkbox"/> Storage of all the documents in Open KM <input type="checkbox"/> Open KM allows version control
No automatic feedback from the internal experts/ Area head of the documents prepared by the area member.	<input type="checkbox"/> Open KM allows writing of comments/notes to documents and folders  <input type="checkbox"/> Open KM allows notifying a user during an upload of the document.
Difficult for the Area Head and AACUP coordinators to monitor the status of document preparation.	Open KM allows view to all documents uploaded and it has notify feature

Process flowchart with Swim lane Diagram in Figure 2 were used as guide in the configuration of the electronic document management system. There were four users of the system, namely the Administrator, Area Chairperson, Area Member and Accreditors. The Administrator in the system pertains to the person who configures the system and setup the preliminary taxonomy and categories. The administrator is also responsible for the creation of user accounts and assigning profile to the created user. The actor Area

Chairperson/head pertains to the person who will oversee the preparation of documents in a specific area of the AACUP instrument. The actor Area Member is a person who is tasked to collect the documents from various sources and will package the documents so that it will be ready for accreditation. The actor accreditor pertains to the person who will browse and check all the documents against the AACUP instrument. The accreditor will rate the compliance of a specific area against the AACUP standard. Figure 2 shows the process flowchart with swim lane diagram which depicts the activities during the accreditation preparation and during the accreditation visit. It also shows who perform those activities and when will it be performed. Figure 2 shows that the area member can upload documents to support a claim in the AACUP standard and notify the area chairperson. The Area chairperson can also upload documents and tag the appropriate category. If the area chairperson will receive a notification from the area member that he or she was able to upload a document, the area chairperson then, will examine the document for correctness and appropriateness and tags the appropriate category, however if there is a need to modify or change the document the Area chair will give feedback to the member so that an updated document can be uploaded again. During the accreditation visit, the accreditor will browse the documents and give comments if necessary.



**Figure 2:** Process Flowchart with Swim lane Diagram of Document Management System to Support Accreditation

## Implementation

There are several Stages in the implementation phase which are Installation, Configuration, User Training and Deployment. An available open source electronic document management system – Open KM.

### Installation

The open source software was installed in a Windows based server with a processor of Intel Core 2 Duo CPU @ 2.8GHz and 2GB RAM. The operating system of the server was Microsoft Windows XP Professional Version 2002 Service Pack 3. After the initial installation and configuration the preview feature of the system did not work. Other open source softwares

were also installed so that the preview feature of the system will work like swftools-2011-10-10-1647 and ImageMagick-6.7.4-Q16-windows.

### Configuration

The system was configured according to the accreditation needs of the university. Profiles were created and assigned with appropriate privileges. A very important configuration is the Taxonomy. It is where all the documents are physically uploaded. The taxonomy of the documents shows how the documents are organized. A good organization of documents is crucial in the system to facilitate the ease of uploading and sharing of the documents. The taxonomy was initially created by the administrator in such a way that the documents were organized according to the source of the documents. Category is the logical organization of documents which can overlap with the taxonomy. The categories were created according to the AACUP standard instrument. There were ten (10) categories one for each area namely Area I – Vision Mission Goals and Objective, Area II – Faculty, Area III- Curriculum, Area IV –Support to Students, Area V – Research, Area VI – Extension &Community Involvement, Area VII – Library, Area VIII- Physical Plant &Facilities, Area IX – Laboratories, Area X – Administration.

### User Training

An operational manual was developed for the accreditation team and accreditors . With the permission of the College of Arts & Sciences –Dean a user training was conducted at Bukidnon State University Computer Laboratory using the operational manual. The training was conducted to the accreditation team of BSIT program. Each of the participants was given their user name and password to be able to use the EDMSA. A slight delay was experienced during the initial logon to the server. It took several minutes before some participants were able to connect to the server. However, once connected to the server, there were no more problems in the uploading of documents. The participants were able to familiarize the system easily. A delay was experienced again when the participants logoff from the system simultaneously. Thus, it took several minutes for some users to be able to log off.

### Deployment

The system was deployed after the training and is accessible only within Bukidnon State University campus. The source of the documents needed for accreditation comes from various units in the university, but for pilot testing its only the IT Department and the library that can directly upload its document to the system.To easily share documents to other users, the documents are uploaded and appropriate categories are tagged.

## Evaluation

A post pilot implementation test was conducted to evaluate the functionality, effectiveness and usability of Electronic Document Management System for Accreditation

(EDMSA). The evaluation questionnaire was given to seven (7) members of the BSIT program accreditation preparation team Table 3 shows the mapping of the problems encountered in the preparation for program accreditation, the corresponding question that will evaluate whether the problem is solved through the use of the EDMSA and the result of the evaluation.

**Table 3:** Mapping of Problems, Evaluation Question and Evaluation Result

The Problems encountered during the preparation of documents for accreditation	Evaluation Question	Mean	Scale
Single document is replicated to support different items in different areas of the AACUP instrument.	<input type="checkbox"/> Tagging Documents from other items of the same area of the AACUP standard in EDMSA is easy. <input type="checkbox"/> Tagging Documents from other area of the AACUP standard in EDMSA is easy.	5	Agree Strongly Agree
Difficulty in retrieving the data from other offices	<input type="checkbox"/> Able to Retrieve Data/Document from other offices using EDMSA <input type="checkbox"/> Data/Documents needed in the accreditation is easily organized in using EDMSA	3.28 4.865	Neutral Strongly Agree
Difficulty in the reproduction of documents	<input type="checkbox"/> Tagging Documents from other items of the same area of the AACUP standard in EDMSA is easy. <input type="checkbox"/> Tagging Documents from other area of the AACUP standard in EDMSA is easy.	5 5	Strongly Agree Strongly Agree
Documents from previous accreditation are not preserved	<input type="checkbox"/> Documents are intact and preserved in the EDMSA and available for future use. <input type="checkbox"/> I could lock/unlock documents to secure and have control of the documents in using EDMSA <input type="checkbox"/> I could easily search documents by content, keywords, modification date, author and document type.	4.71 4.71 4.71	Strongly Agree Strongly Agree Strongly Agree
No automatic feedback from the internal experts/ Area head of the documents prepared by the area member.	<input type="checkbox"/> Able to get feedback from internal experts/Area Head regarding documents uploaded using EDMSA. <input type="checkbox"/> Able to write notes/comments on my documents and folders in EDMSA.	4.43 4.71	Agree Strongly Agree
Difficult for the Area Head and	<input type="checkbox"/> Able to monitor the status of	4.14	Agree

AACUP coordinators to monitor the status of document preparation.	document preparation using EDMSA. <input type="checkbox"/> I could easily view documents check-out, locked, downloaded, subscribed, last modified and last uploaded in using EDMSA.	5	Strongly Agree
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All the questions were measured using a five (5) point scale, in which five (5) means strongly agree and one (1) as Strongly Disagree. From the study, it was found out that the mean ranges from 3.28(Neutral) to five (5) (Strongly Agree). For the problem about document replication to support different items in different areas of the AACUP instrument and difficulty in the reproduction of documents, the users gave a rating of 5 which means that they strongly agree that tagging documents from other items of the same area of the AACUP standard in EDMSA was easy and tagging Documents from other area of the AACUP standard in EDMSA was also easy. Through the tag feature of EDMSA there is no need to physically replicate a document. The users strongly agree, with a rating of 4.865 that data/documents needed in the accreditation was easily organized using EDMSA. And a neutral rating of 3.28 for being able to Retrieve Data/Document from other offices using EDMSA. It only shows that the problem in the difficulty of retrieving the data from other offices was solved using EDMSA. A rating of 4.71 which means the users strongly agree that documents are available and preserved in the EDMSA and available for future use, users could lock/unlock documents to secure and have control of the documents in using EDMSA and users could easily search documents by content, keywords, modification date, author and document type. All of these items implied that the problem about documents from previous accreditation preservation and availability was solved through the use of EDMSA. Another problem addressed by EDMSA is the No automatic feedback from the internal experts/ Area head of the documents prepared by the area member. The users agree (4.43) that they were able to get feedback from internal experts/Area Head regarding documents uploaded using EDMSA and they strongly agree (4.71) that they were able to write notes/comments on my documents and folders in EDMSA. A rating of 4.14, which means the user agree that they were able to monitor the status of document preparation using EDMSA. A rating of 5, which means they strongly agree that they could easily view documents check-out, locked, downloaded, subscribed, last modified and last uploaded in using EDMSA. The high rating implied that the Difficulty of the Area Head and AACUP coordinators to monitor the status of document preparation was solved through the use of EDMSA.

**Table 4:** Summary of Evaluation Ratings of the Accreditation Team

Description	Mean	Scale
Functionality	4.81	Strongly Agree
Effectiveness	4.14	Agree
Usability	4.81	Strongly Agree

Overall	4.66	Strongly Agree
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In terms of functionality of EDMSA, the users gave a rating of 4.81, which means that they strongly agree to the nine (9) items in the evaluation questionnaire that indicated EDMSA provide a useful function. Data presented in table 4 shows that users agree with a mean of 4.14 that the system is effective. It means that the system produced the desired result. The same table shows a rating of 4.81 to the usability of the system, which means that the users strongly agree that they can easily learn how to use the EDMSA and they feel comfortable using it. The background of the users of the system might be a factor on how they rated the system. The users are Information Technology faculty who are comfortable with using different softwares, thus the users can easily learn how to use the system and they are tolerant to any technical glitches that they might encounter. From the interview conducted some of the responses were the following. “With the use of the system I don’t have to reproduce the documents even if it will be needed in several items in the AACUP instrument because I will simply tag those items in the category however, the system do not allow tagging of a particular page in a document”, “I can easily monitor the status of preparation and I can easily identify Items which don’t have any supporting documents yet”, “The system don’t function well on some browser”.

**Table 5:** Internal Accreditors Evaluation

Question	Description	Mean	Scale
1	Using EDMSA in my job as an accreditor would enable me to accomplish tasks more quickly.	4.67	Strongly Agree
2	Using EDMSA would improve my job performance	4.33	Agree
3	Using EDMSA would enhance my effectiveness on the job.	4.33	Agree
4	Using EDMSA would make it easier to do my job	4.33	Agree
5	I would find EDMSA useful in my task as accreditor.	4.67	Strongly Agree
	Overall	4.47	Agree

Another Post Pilot Implementation Test was conducted to check the usability of the Electronic Document Management System for Accreditation. The post pilot implementation evaluation questionnaire was given to three(3) members of the university internal accreditors namely the Vice President of Academic Affairs, CAS Associate Dean and the former Chairperson of BSIT program. Table 5 shows that the accreditors strongly agree, with a mean value of 4.67% that the system is useful in their task as accreditors and the system enables them to accomplish their tasks easily. With a mean value of 4.33, the evaluators agree that system

improve their job performance, enhance their effectiveness as accreditor and makes it easier to perform their job.

## **Recommendation**

The overall rating of 4.66 by the users evaluation and a rating of 4.47 by the internal accreditors evaluation and the mapping of the problems encountered during the preparation for accreditation, the evaluation question and results shows a high rating which implied that the EDMSA addressed the problems identified thus the utilization of the system to support the accreditation is recommended. For the improvement of the system the researcher suggested that an updated version of OpenKM will be used to solve the compatibility problems with the browsers. It is also better if a bigger memory and high speed CPU will be used for the server to avoid delay in the login and logout of the users to the system. Another improvement needed for the system is the tagging feature, as of now the user can only tag the entire document. It will be better if the user will be able to tag a specific section or page so that the user does not have to browse the entire document. Another study is also recommended to focus on the technical performance of the system in terms of maximum size of data and maximum number of users the system can handle.

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# **Dynamics of Internet Addiction in Thai University Students: A Qualitative-Method Investigation**

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## **Abstract**

As the rapid growth of internet services, many of Thai University students are easily access online and trend to be high -risk of internet addiction/problematic internet use (IA/PIU), resulting in their poor quality of life. The aim of this study is to gain insight and conceptualize the dynamics of internet addiction in mild-to-moderate internet users. Participants included 10 Thai university students major in psychology, Ramkhamhaeng University (7 females and 3 males). All of them got score on Internet Addiction Test (IAT) as mild or moderate level of addiction with an average time spend online as 5.70 (SD=1.947) hours/day. The focus group approach with semi-structure interview was done for collecting the data. Results revealed dynamic of internet addiction by addressing the relation between precipitating factors contribute to online access, the specific online activity and impact of online overuse. For all students, they reported that free time and emotional state were precipitating factors that led them to go online while specific online activities and website access were differences between males and females. Males seem to go online for gaming while females usually online for social chatting and entertainment purpose. Internet overuses impact negatively to physical and psychological state of students. However, some students reported benefits of spending time online that it was relax, economical and open to the world. Our findings provide clear-picture of why Thai university students prefer to go online. Therefore, lecturers may apply this finding by using internet as a tool for classroom management. More implications are also discussed.

**Keywords:** Internet Addiction, University Students, Qualitative

## **Introduction**

Since the wide spread of internet services, the increase of internet users is rapidly growing up for all around the world, including people in SEA region and Thailand. The statistic revealed that Thai's users is ranged as the 4<sup>th</sup> place in SEA with more than 29 million users. The largest amount of users in SEA is Indonesia (approximately 53 million users), Vietnam (approximately 49 million users) and Philippines (approximately 44 million users), respectively (Internet Live Stat, 2016). Also, it had been revealed that mainly users are in generation Y (aged between 22-36 year olds) with 64.4 percent when compared with all aged groups (Electronic Transactions Development Agency, 2016). University students and young

adult are much more likely to access internet and trend to be high-risk of internet addiction/problematic internet use (IA/PIU).

IA/PIU emerges as one of the psychiatric problems appearing in the diagnostic and Statistical Manual of Mental Disorders: Fifth Edition (DSM-5). According to Block (2008), internet addiction is ‘ conceptually a compulsive-impulsive spectrum disorder that involves online and/or offline computer usage and consists of at least three subtypes: excessive gaming, sexual preoccupations, and e-mail/text messaging...’ The problematic behavior of internet addiction users include of (i) excessive use, (ii) psychological distress when inaccessible to internet, (iii) striving for prolong hours of internet use, and (iv) resulting to poor functioning and quality of life (Block,2008; Király1, Griffiths, and Demetrovics, 2015).

Previous study revealed upshot of internet overuse that impact on personal life, emotion, physical health, psychological health, family and social relationship and overall quality of life (Jie, et al., 2014; Fox and Moreland, 2015; Snyder, et al., 2015). However, most of those previous studies indicated effect of IA/PIU to users in some specific domain while for this present study, we will fulfill the gap by providing full-picture of IA/PIU (input- process-output) in Thai university students so that lecturers may apply this finding by using internet as a tool for classroom management later on.

## Objective of the Study

The aim of this study was to gain insight and conceptualize the dynamics of internet addiction in mild-to-moderate Thai undergraduate users.

## Framework of the Study

The study employed a qualitative approach to find the dynamic of internet addiction in Thai undergraduate students. The framework of study was illustrated in Figure 1.



**Figure 1:** Framework of the study

This framework was drawn based on 2 paradigms, (i) information-processing paradigm and (ii) addiction and emotional developmental phase. The information-processing paradigm is one of the paradigms in the cognitive psychology. It is the idea that cognition can be thought of as information passing through a system and the relationship among them lead to explain how individuals go about performing specific cognition tasks (Galotti, 2008). Meanwhile, addiction and emotional developmental phase emphasizes the relationship between abuse, addiction and emotion across developmental stages of addiction. This paradigm includes 3 stages of (i)

initiation when people are triggered with the most influential factors. This period is marked by a general increase of emotional lability and widening array of social stressors. (ii) Maintenance when emotion plays a crucial role in the transition from controlled to excessive behavior. Persistent behavior often represents a way to cope with negative emotions and obtain rewards. Lastly, (iii) relapse when persons perceive of positive affect as well as the brain changes in reward and stress system may both play a role in continued behavior, including vulnerability to relapse (Kassel, Veilleux, Heinz, Braun, & Conrad, 2013).

## **Methodology**

Phenomenological research is a qualitative strategy in which the researcher identifies the essence of human experiences about a phenomenon as described by participants in a study (Creswell, 2009, p.231). The procedure involves studying a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning (Creswell, 2009, p.13). Therefore, for our study, the qualitative phenomenological research is an appropriate methodology in gaining insight and conceptualizing the dynamics of internet addiction in 10 Thai undergraduate internet users. Participants were screening their level of internet addiction by using the Internet Addiction Test (IAT). Ten participants with mild-to-moderate level of internet addiction were recruited into the analysis to explore their phenomenon by employing focus group.

### **Participants and procedure**

The present study adopted a qualitative method with focus group technique to obtain details of internet addiction with 10 Thai undergraduate students major in psychology, Ramkhamhaeng University (7 females and 3 males). Method to recruit participants started with testing the level of internet addiction by using the Internet Addiction Test (IAT) with volunteer students. For some of them who got score as mild or moderate level were asked for permission to attend the focus group so that they were all homogeneous.

### **Focus group and Procedure**

Focus group provides insight into how people think and provide a deeper understanding of the phenomena being studied. This method is most effective with 7-12 participants. This is the optimal size to promote discussion and enable the facilitator to keep the group on task (Nagle and Williams, 2016). Focus group let the researcher to capture participants' meanings by keeping a focus on learning the meaning that the participants hold about the problem or issue, not the meaning that the researchers bring to the research (Creswell, 2009). In this study, the focus group was conducted with undergraduate students who were screened as internet addiction in mild-to-moderate level.

At the beginning of the session, the researcher briefed participants with the research aims and procedure of the focus group. During the session, researcher facilitated participants to

share their experience, perspective, attitude and feeling by adopting semi-structure questions on the following topics: (i) precipitating factors for going online, (ii) the most frequency online activities, (iii) impact of internet use, and (iv) opinion toward characteristic of healthy internet user. Major questions explored in the focus group included (i) which online activities did you spend the most time on and why? how much time on internet averagely per day? Do you think, you use internet excessively or internet overuse? (ii) what factors did you think that they triggered you to use internet?, (iii) did internet use influence on your physical health, psychological health, social life or school work? What consequence of your internet use bother you the most?, (iv) what the characteristics of healthy internet user? By the end of the session, researcher allowed participants to freely share their additional opinions by giving the question about anything else you would add about an internet use? The entire process lasted approximately 1 hour and 30 minutes and was audio-recorded.

## **Measures**

There were 2 measures used in this study, including demographic questionnaire and the Internet Addiction Test (IAT).

### **Demographic Questionnaire**

A demographic questionnaire was developed for this study that included items of gender, GPA, and internet background e.g. age at the first internet use, age at the first aware of internet addicted, channel of internet access, pattern of internet use and time spend on internet per day.

### **The Internet Addiction Test (IAT)**

The IAT developed by Young (1998), was 20 items that used for measuring the presence and severity of Internet dependency. This IAT test was self-rating which each item could be rated on a 5 -point scale (ranging from 0-5). Interpretation would be done by calculating a sum of item-rating given by participants, and then, considering score with classification index; 0-30 indicated normal level of internet use, 31-49 indicated mild level of internet addiction, 50-79 indicated moderate level of internet addiction, and 80 above indicated severe dependence upon the internet (Young, 1998). For our study, participants who got score in mild-to-moderate level of internet addiction (scores on 31-79) were taken into the analysis.

## **Data analyses**

Obtained data by the focus group was analyzed in a number of steps. (i) Authors sought to describe phenomenon from the participant's perspectives without adding our own judgments. (ii) Generating themes by considering labels and definitions that emerged from the raw data, and then, organized data into main themes and subthemes based on research framework. (iii) Coding contents by which classified them into main themes and subthemes.

If there were new contents that had not been captured, those were also investigated and identified. (iv) Validating the finding by employing triangulation analysis. Each author independently coded the content using the agreed upon research framework. If there were some discrepancy, authors (as a team) resolved through mutual discussion and agreement. Up until, emergence main themes and subthemes were convergence and saturate.

## Results

### Participants' demographics

A detailed description of the participant's demographics was presented in Table 1. There were 7 females and 3 males with an average GPA was 2.84 (SD = .35). An average age at the first internet use was 13.80 (SD = 3.78) years old while an average age at the first aware of internet addicted was 18.10 (SD = 3.21) years old. Most of them accessed the internet from laptop and smart mobile phone (90%). All of them preferred all-day long internet accessing. In terms of daily internet usage, participants reported using the internet approximately 5.70 (SD = 1.95) hours per day. Meanwhile, level of internet addiction as assessed by the IAT revealed 6 students were as mild level and 4 students were as moderate level.

**Table 1:** Participants' demographics

Variables	n = 10
Gender (n, %)	
Male	3 (30%)
Female	7 (70%)
GPA; mean (SD)	2.84 (.35); Min=2.15, Max=3.50
Age at the first internet use, years old; mean (SD)	13.80 (3.78); Min=10, Max=21
Age at the first aware of internet addicted, years old; mean (SD)	18.10 (3.21); Min=14, Max=25
Channel of internet access, may be more than 2 channels (n, %)	
Desktop computer	5 (50%)
Laptop/ Notebook	9 (90%)
Smart mobile phone	9 (90%)
Tablet	2 (20%)
Daily internet use, hours; mean (SD)	5.70 (1.95); Min=3, Max=10
Level of internet addiction, IAT Interpretation (n, %)	
Mild level of internet addiction	6 (60%)
Moderate level of internet addiction	4 (40%)

## Dynamic of Internet Addiction

Three main themes and six subthemes emerged from the focus group relating to our research framework as illustrated in Figure 2.



**Figure 2:** Dynamic of Internet addiction

### Theme 1: Precipitating factors to internet use

The precipitating factors embraced trigger determinants or situations that enabling students to use the Internet for both of school and non-school related purposes. Males and females students responded on the same directions which divided into subthemes of (i) free time and (ii) emotional state. Most of participants noted that both factors, together with other notification cues, contributed them to overuse of the Internet at different times.

#### Subtheme 1.1: Free time

Free time, for participants, meant a feeling of nothing else needed to be done accordingly they spend those times with online activities. For example, one female student said “When I have no idea on what things to do, I prefer using Facebook to check update rather than thinking of doing something else”

#### Subtheme 1.2: Emotional state

Surprisingly, several students reported that they preferred to go online no matter of being in positive or negative emotional state, but each emotional state triggered them to go online for different purposes. Example of negative emotion that triggered students to use internet; one female student said “When I feel sad or stress, I search for a quote to encourage myself” while another female student said “I updated status on Facebook when I feel upset or frustrate to ventilate my feeling. And when someone post supportive comments, I feel better since it seems like somebody understand me” Moreover, some students reported of accessing online with non-specific purposes when they have negative emotion or bored. At that time, the popular website/application would be Facebook, Instagram, Line, Pantip, and Twitter. While example of positive emotion that triggered students to use internet; one female student said “I use internet heavily than usual when I feel happy. I love to update status on Facebook to let

everyone know my situation”. Therefore, student seems to spend longer time on internet even they were in positive or negative emotion.

Moreover, other than free time and emotional state, there was another factor that contributed students to go online. Since some students reported that “I will spend time on internet when the notification is signaled, especially notification from Facebook or Line. That arouses me to login”

## **Theme 2: Specific online activities**

This theme described the specific online activities that participants mostly engaged in and the reasons for their satisfaction. Typically, participants preferred to engage in multiple online activities via various tools. The most frequently online applications included Facebook, Line, Twitter, Instagram, Youtube, Pantip Board (The most popular web board in Thailand) and Game online. This could be divided into subthemes of (i) males engaged in online activities and (ii) females engaged in online activities.

### **Subtheme 2.1: Males engaged in online activities**

Male students mostly favored game online activities, especially game with fighting, shooting and simulating. One of them reported that “I love to play game online for a whole day. Start morning with playing game, then having breakfast, and then back for playing game again. I love to beat with friends online and feel better if I could be a winner.” While some students preferred application of Youtube for entertainment and backup programs of sports and news. Most reasons of going online for male students were for perceiving information and relaxing more than social communicating with others.

### **Subtheme 2.2: Females engaged in online activities**

Female students were likely to engage in social media for chatting, communicating with peers, posting personal comment and status, feeding news updated, celebrity updating and entertainment purposes. One female student said “I like to refresh my news feed and look at the followers update to see what is going on with them. If they post dramatic status, it drives me to find out more information about them.” While the reason for going online for female students was different from males. Even purpose of perceiving information was important but females liked to express and share their feeling and personal experiences much more than male students.

## **Theme 3: Impact of Internet Overuse**

This theme characterized the consequences of internet overuse for both short-term and long-term effects. Subthemes included (i) negative impact and (ii) positive impact

### **Subtheme 3.1: Negative impact**

Largely, all participants reported of negative impact from internet overuse, including the impact on physical health and psychological health. Of course, the overuse of online activities led participants to spend more time with electronic monitors which resulting in visual problems, dry eyes, sleep deprivation, gastritis and office syndrome (neck pain, backache and trigger fingers). One student said “While I go online, I don’t want to do something else even eating. I also have sleepless because of playing online. Internet also causes me to have dry eyes and I have to use teardrops repeatedly.” Meanwhile, impact on psychological health could be emotional and behavioral problems e.g. less of interpersonal contact, less of face-to-face communication, less of tolerance while more procrastination, more aggression and more frustration. For example, one student said “When I go online and someone disturbs me, that let me feel upset and irritable even I know this is not reasonable.”

### **Subtheme 3.2: Positive impact**

Remarkably, some students reported benefits of spending time online that it was relax, economical and open to the world. For example, one female student reported that “I use free call via internet and that save my money.” Some students said they use Internet for school-work activities, e.g. searching free academic research and submitting assignment to professors. One of them also reported of using Internet for e-commerce purpose as well.

## **Discussion**

First of all, this study extend an understanding of IA/PIU by conceptualize the dynamics of internet addiction in Thai undergraduate users. Even in the study, participants were mild -to-moderate internet users based on IAT test which measured ‘internet dependency’. All participants reported that they perceived themselves as ‘internet overuse’ or ‘internet addiction’. Therefore, we will discuss our results as excessive internet use, complying with participants’ perception.

### **DYNAMIC OF IA:**

Main result, as a whole procedure, we found an interaction among precipitating factors (free time and emotional state) that trigger users to go online while the most favorite online activities in male and female students were differences, resulting in negative and positive impact to the users. Not many previous studies demonstrated an entire cycle of internet addiction, however Suissa (2015) studied and revealed the finding of cycle of internet addiction in 5 steps, started with (1) negative feeling e.g. feeling alone, uncomfortable and not accepted by the group, (2) engage in online activities e.g. online gaming, Facebook, (3) artificial feeling of well-being, temporarily interruption negative emotions without attacking root causes (4) feeling down and guilt when thinking about real situation, and (5) more likely to be exposure to addiction. Therefore, in Thai context, the cycle of IA/PIU with

undergraduate students seem to get along in the same direction; the emphasizing was that the factors within the whole procedure could effect to each other and being inter-correlation.

#### INPUT:

For the precipitating factors that trigger Thai undergraduate students to go online included factors of free time and emotional state. Most of previous studies identify risk factors related to personal feeling and negative emotion that triggered users to engage in online activities until became addicted, e.g. feeling boredom, stress and escapism (Li, O'Brien, Synder, and Howard, 2015) and psychopathological condition e.g. ADHD, depression, anxiety and impulsivity (Hyun, et al., 2015). For Thai situation, our study also found the significant of psychological factor, include of positive and negative emotional state that activated students to engage in online connection but for different purposes. Additionally, our study found another triggered factor which was feeling of free time when they perceived of nothing else needed to be done, therefore they decided to participate in internet activities instead.

#### PROCESS:

In terms of the specific online activities, the most preferred activities in Thai students included online chatting and communication, gaming and video watching but there were slightly differences between male and females. For males, they mostly favored game online while female were likely to engage in social media for chatting, communicating with peers, posting personal comment and status, feeding news updated, celebrity updating and entertainment purposes. According to the study of Laconi, Tricard and Chabrol (2015) in France, they also found differences between males and females, and between adults (older than 30 years old) and young adults (18-30 years old). The most favorite specific online activities among women, men and young adults were online gaming and information seedonglu that not associated with professional or academic purpose. Meanwhile, women and young adults also spend most of the time with consumption of music and video on internet. Therefore, variables within individual, social structure, social context and culture need to be considered since they influenced on individual's online behavior.

#### OUTPUT:

The impact of internet overuse to Thai students included negative impacts e.g. poorer physical health, emotional problem and behavioral problem while positive impacts e.g. feeling of relaxation and leisure, economical and open to the world. Most previous studies indicated dark side of problematic internet use to users' functioning and quality of life e.g. greater experience of negative emotion, stress, anxiety, depress, aggression, privacy violation and feeling of self-inferiority, (Kim, Namkoong, Ku, and Kim, 2008; Hong, Huang, Lin and Chiu, 2014; Fox and Moreland, 2015). However, not only negative impact, some previous studies presented positive side of internet use, especially chatting online. According to the study of Magsamen-Conrad, Billotte-Verhoff, and Greene (2014), communication through technology could be as a potential source for improving the well-being for particular individuals since some people feel not comfortable communicating in face -to-face setting.

Since internet use impact for both sides to individual, therefore users should balance the appropriateness of use and be “healthy user” so that they could maximize its benefits.

## **Limitation and Future Study**

Our study included participants with mild-to-moderate internet addiction, so that the generalization to other participants may be the limitation. In fact, the value of qualitative research lies in the particular description and themes developed in context of a specific site; “Particularity rather than generalizability” (Creswell, 2009, p.193). Therefore, results of this study fit well with the context of Thai undergraduate students at the Ramkhamhaeng University rather than generalize to all Thai undergraduate students.

Future study may apply (i) qualitative methodology with other group of interests, (ii) quantitative methodology with large sample and variety characteristics for generalization, (iii) mixed-method by combining both qualitative and quantitative methodology to provide an expanded understanding of research problems. Also, future study may initiate the IA-prevention program/intervention to helping users with severe addiction.

## **Conclusion and Implication**

In sum, our results provide a conceptual framework of the dynamic of internet addiction in mild-to-moderate Thai undergraduate users. Therefore, lecturers may apply this finding by using internet as a tool for teaching and learning, for example when lecturers assign homework or any of school-related activities online, they should (i) concern about the difference of gender since our finding found that male and female students attend and engaged in different online activities. (ii) Since our finding reported benefit of spending time online that it was relax and open to the world, so school-related activities should be created as a new challenge, creative and innovative for enhance students’ experience and vision. (iii) Since some students reported of using internet when they observed the notification and new-feed, so school-related activities should be interactive, feedback and update continuously. Moreover, student also reported of ‘healthy internet user’. It involves with characteristic of users who go online within time-limited, specific purpose, and not disturbs daily life function. Healthy internet user could lead person to balance their personal life and function effectively.

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# **‘Mediators’, ‘The Mediated’ or ‘Predictors’: Re-Conceptualizing the Tripartite Role of Personality Factors in Higher Education Technology Acceptance Research**

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## **Abstract**

A decade and three years have elapsed, but the Unified Theory of Acceptance and Use of Technology (UTAUT) model continues to provide answers to technology acceptance across spectrums of endeavours. Though the UTAUT epitomises a refined product of ‘model metamorphosis’ and originally predicting 70% variance in behavioural intentions, the academic benevolence in knowledge construction, impressed upon the proponents, to lay ajar the model ‘gates’ for future variable additions to improve upon its predictability. The quest to juxtapose possible factors to improve the agility of the model in contemporary research has seen the sudden awakening of the notable personality factors (attitude, self-efficacy, anxiety and experience) which the original UTAUT constructors put to ‘rest’ as insignificant. The concern which current research in higher education technology acceptance research fails to address, is the validation of the role of these personality factors in the UTAUT model. The prospects of the placement of personality factors in UTAUT studies in higher education technology acceptance research seem to lack precision and are misguided. The quandary has been whether they are ‘mediators’ of the exogeneous variables (performance expectancy, effort expectancy, social influence and facilitating conditions), or ‘the mediated’ by the exogeneous variables or actual ‘predictors’ of intentions in acceptance and use of technology, implicit in the UTAUT model. This concept paper discussed the tripartite role portrayed by these personality factors and provided implications and suggestions to direct for both current and future technology acceptance research in higher education.

**Keywords:** Personality Factors, Exogeneous Factors, UTAUT, Technology Acceptance, Higher Education

## **Introduction**

Technology acceptance studies have span decades and several models have been propounded to study the underlying indices of acceptance decisions by individuals. The coverage of research into technology acceptance has been profoundly widespread from telecommunications, industrial organizations, health, business, marketing, education etc .With the advent of educational technologies and their integration into pedagogy, technology acceptance research has now seen a wider focus in the education sector. Most importantly has been studies focused on e-learning with subsets of online learning and blended learning approaches, supported by Learning Management System (LMS) technology. The introduction of the LMS technology and virtual reality have sparked technology acceptance research particularly in higher education delivery where the current focus is towards learning

beyond the walls of educational institutions. The ultimate rationale has been to study acceptance levels, adoption and continual usage levels of potential adopters, mainly faculty members and students.

Though many other models exist, the predominant choice of most authors of contemporary research has been the Unified Theory of Acceptance and Use of Technology (UTAUT) model by Venkatesh, Morris, Davis & Davis (2003) particularly underpinned by its integration of other models and predictive ability. The key constructs of the model (performance expectancy, effort expectancy, social influence and facilitating conditions) have been mainly used as the predictors of behavioural intention to accept technology, relinquishing the possible effects of personality factors in technology acceptance. However, there has been a growing interest in personality factors as an explanatory tool in the information systems (IS) literature (Greathead, 2007). These factors represent inherent dispositions individuals possess that to a large extent influence their behaviour towards phenomena and technology in particular (Fisbein, 1980). Svendsen, Johnsen, Almås-Sørensen, & Vittersø (2013) explain personality factors to be the dynamic organization within individuals, representing those psycho physiological systems that ultimately determine their characteristic behaviour and thought patterns. This points to the eminence of personality factors in intention decisions. In technology acceptance research, findings from recent studies (Nassuora, 2012, Oye, A.Iahad, & Ab.Rahim, 2014) have proven personality factors (attitude, self-efficacy, anxiety and experience) to influence individual behavioural intentions to accept technology especially in higher education research.

In view of this, some authors have begun incorporating them (individually, some or all) in the UTAUT model on studies seeking to unravel determinants of acceptance of technology in higher education. This represents a major contradiction in the UTAUT model that modelled the influence of personality factors as external and insignificant rendering their exclusion in the model and hence in earlier acceptance studies adopting the model. Consequently, the major focus of technology acceptance research in higher education is to unveil the various antecedents of individual acceptance of technology while improving on the predictive power of models adopted in technology acceptance with recourse to fine tuning the accuracy of prediction. The intriguing element inherent in the inclusion of personality factors in technology acceptance research in higher education based on the UTAUT model, has been to explicitly define their role in this widely used acceptance model. The quandary has been whether they are still 'the mediated' by the exogenous variables (performance expectancy, effort expectancy, social influence and facilitating conditions), or 'the mediators' of the exogenous variables or actual 'predictors' of intentions in acceptance and use of technology, implicit in the UTAUT model. This concepts paper seeks to provide a definite distinction into the roles of personality factors in contemporary research in higher education, especially within the framework of the UTAUT model.

## **Background**

A plethora of factors may induce individual behaviour towards phenomena. Within the portfolio of all these factors, personality factors also present a conspicuous nature. Osbek, Almaçık, Koc, Akkılıç & Kaş (2014) opine that among others, personality factors pose particularly important effect on individual behaviour formation (Koca & Koç, 2008; Erciş & Deniz, 2008). Erciş and Deniz, (2008) define personality as an individual's responses to particular situations. Erkuş and Tabak, (2009) view personality as a consistent, stable and conventional relationship of an individual with his internal and external

environments and is interrelated with all of the personal characteristics. Allport (1961, cited in Osbek et al., 2014) defined personality as “a dynamic organisation within the individual of those psychophysical systems that determine his characteristic behaviour and thoughts” (p.1).

Personality factors thus seem to affect the totality of life of individuals as a set of characteristics that differentiate them from others in terms of both natural and artificial tendencies. Hence, it can be argued that personality traits are significant factors which cause different perceptions or responses against the similar instances (Erkuş & Tabak, 2009). It is however not surprising that in technology acceptance and usage studies, earlier authors who attempted to unravel antecedents of individual acceptance of technology through several model developments, downplayed not on the role of personality factors. Fishbein and Ajzen (1975), Ajzen (1985) and Davis, Bagozzi, & Warshaw (1989), all lay stress on the importance of a personality factor like attitude to influencing individual acceptance of technology, not to mention Compeau & Higgins (1999) who emphasized computer anxiety and self-efficacy, while Thompson, Christopher, Higgins & Howell (1991) focused on computer experience. Relatively recent empirical evidence on how personality factors may influence the technology acceptance of individuals could be traced to studies from Erdoğan & Esen, (2011), Shih & Fan (2013) and others. Consequently, personality factors have been demonstrated to be associated with technology acceptance in various ways and among several technologies particularly in higher education. According to Svendsen et al., (2013), in general, it appears that the personality dimension often characterised as introversion or extroversion, is related to many aspects of human– computer interaction and in higher education technology acceptance research, the emphasis of personality influence has been towards either faculty members or students in relation to willingness to interact with technology.

Owing to the importance personality factors brings to the fore in technology acceptance research; it has prompted their resurgence and infusion in higher education research. Specifically, most studies have been aimed at identifying and analyzing the determinants to predicting or explaining why faculty or students accept, adopt or otherwise different forms of web-based technologies (Yu et al., 2010; Alebaikan & Troudi, 2010). In the wake to explaining this phenomenon, most studies have been conducted through the lenses of the UTAUT model which is evidenced by report from systematic reviews by authors such as Attuquayefio & Addo (2014); Sumak, Heričko & Pušnik et al., (2011) and Dwivedi, Rana, Chen, & Williams (2011). More than a few of these studies have begun incorporating personality factors into the UTAUT model to test for their significance. Ironically, the proponents of the UTAUT model modelled these personality factors as not significant in determining behavioural intentions in the acceptance of technologies and limited the model to influential determinants of performance expectancy, effort expectancy, social influence and facilitating conditions. Hence the effects of personality factors were theorized to be consumed by these factors which oppose evidence from recent studies employing the UTAUT model.

The gap in the literature has however not been a contention on whether personality factors affect technology acceptance or not, rather has been the specification of the significant roles played by these factors in technology acceptance research in higher education studies. More specifically has been their different effects in technology acceptance studies within the context of a defined model (in this instance the UTAUT model). Though previous researches have attempted to provide some level of explanation, the efforts of a few

have just been limited to the juxtaposing of just one or two of these personality factors and tested merely for one or at best two of the roles in the UTAUT model albeit in separate studies. As society is dynamic, so is technology research and hence the need to put in proper context these roles in order to guide current and future research trends. This concept paper provides the renaissance by grouping and placing the personality factors holistically in the watertight compartment of a single model and conceptualize them by way of expounding the possible tripartite role of the personality factors in the UTAUT model for contemporary research consideration in higher education, verifiable through empirical validation.

## **Role of Personality Factors in Technology Acceptance Studies in Higher Education**

### **Personality Factors as ‘The mediated’ by Exogeneous Factors**

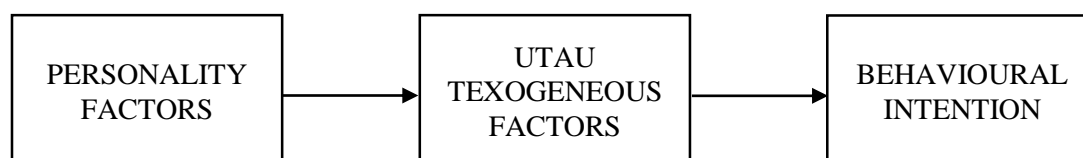
This role represents the first class of roles theorized by the proponents of the UTAUT model, Venkatesh et al., (2003). The original UTAUT model consists of three key predictors (performance expectancy, effort expectancy and social influence) of behavioural intention and two key determinants (facilitating conditions and behavioural intention) of use behaviour. Performance expectancy defines the degree to which an individual believes that using a system will enable him or her attain gains in job performance (Venkatesh et al., 2003). The construct explains that prior to the acceptance of any new technology, individuals project a weighting of the intended benefits to be gained in the event of using that technology with respect to job performance or personal improvement in discharging responsibilities. Hence, performance expectancy has a positive relationship with behavioural intention to accept technology and further predicts behavioural intention and in most cases the strongest predictor of potential users of technology. This is supported by Khechine, Lakhal, Pascot, & Bytha (2014), Percy & Van Belle (2012) and Casdorph (2014).

The effect of effort expectancy, which is associated with the degree of ease of use of a system as indicated by Venkatesh et al., (2003) plays a second fidel to performance expectancy in relation to use intentions’ prediction power. This construct has proven effective in predicting usage intentions in many studies (Afonso, Roldán, Sánchez-Franco, & Gonzalez, 2012, Phichitchaisopa & Naenna, 2014, Kohnke, Cole, & Bush, 2014) and even in some cases outperforming performance expectancy in beta values (Oye et al., 2012, Wu, Hwang, Su, & Huang, 2012).

Within the confines of the UTAUT model, the degree to which an individual believes that important referent others believe he or she should use a system connotes social influence. The influence of peers and other relations on technology usage intentions of individuals have been supported in studies conducted by Guo (2015); Raman, Don, Khalid, & Rizuan (2014); Ain, Kaur & Waheed (2015), and in some cases as a strongest predictor (Guo, 2015, Raman et al., 2014) where cultural influence is predominant.

The fourth major construct in the UTAUT model, facilitating conditions, postulated as not a direct predictor of behavioural intention but rather on use behaviour however, has defied this assertion by Venkatesh et al.,(2003) and has appeared in appreciable number studies as a predictor of usage intention (El-Gayar, Moran, & Hawkes, 2011; Afonso et al.,2012). According to Venkatesh et al., (2003) facilitating condition is degree to which an individual believes an organizational and technical infrastructure exists to support use of the system.

The earlier stands of Venkatesh et al.,(2003) was that the effects of attitude, self efficacy and anxiety on behavioural intention will be fully mediated by the total effects of performance expectancy and effort expectancy, given the rationale that the UTAUT model anticipates only stronger and powerful determinants of behavioural intentions. Chang, Chou &Yang (2010) and Svendsen et al.,(2013) added to the indirect effects of the personality factor ‘experience’ in predicting behavioural intentions to the literature. In this regard, the personality factors operate as indirect determinants in the UTAUT model, whose direct effects are consumed by the principal UTAUT constructs. Consequently, they are best regarded in the initial UTAUT model as ‘the mediated’ effects. These effects are presented in the figure below.



**Figure 1:** Model on ‘the Mediated Effect’ of Personality factors by Exogeneous variables

### **Personality Factors as ‘Predictors’ of Behavioural Intention**

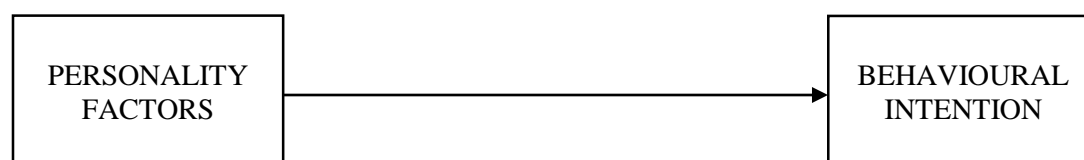
In contrast to having an indirect effect and being mediated fully by exogeneous variables in UTAUT, personality factors have assumed the secondary role of predictors evident in current literature. For instance the trait attitude which is an evaluative judgement either favourable or unfavourable, that an individual possesses and directs towards an object (Elias, Phillips, & Luechtefeld,2012) or an individual’s overall affective reaction towards using a system (Hurst, 2010) has gained a considerable influence in the UTAUT model as a predictor in contemporary technology acceptance research in higher education, even when the major UTAUT predictors (performance expectancy and effort expectancy) are included (Mbengo, 2014; Hurst, 2010; Yamim et al., 2014). In some intriguing instances (Yang, 2010; Thomas et al., 2013; El-Gayar & Moran, 2016) the construct attitude was the strongest predictor of intentions. These results contradict Venkatesh et al.’s (2003) indication that the effect of attitude is spurious, judging within the sequence of consistency with which the construct prevails as a predictor. ‘Spuriousity’ would have been the case in the absence of the key constructs in UTAUT or in the event of a one shot prediction exhibition.

Self-efficacy on the other hand has seen considerable inroads in predicting behavioural intention in technology usage especially LMS acceptance research in higher education in recent times. The construct self efficacy emanates from the social cognitive theory and explained by Bandura (1995) as the extent or strength of one’s belief in one’s own ability to complete tasks and reach goals. This is the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1995). In the technology milieu, Li (2010) cites Compeau and Higgins (1995) who defined self efficacy as the judgement of one’s ability to use technology to accomplish a particular task. Authors (Lee & Huang, 2014; Lwoga & Komba, 2014) provide empirical evidence on the efficacy of self-efficacy in determining usage behaviour intentions.

Additionally, anxiety which is related to the fear an individual exhibits towards a particular task and in the technology acceptance domain, the degree of an individual’s apprehension or even fear when he or she is faced with the possibility of using computers (Venkatesh et al., 2003) contributes to the explanation of higher education technology acceptance research especially in the prediction of usage intentions. As one of the ‘out casts’ in the UTAUT model, recent studies (Olatubosun, Olusoga & Shemi, 2014; Al-alak &

Alnawas, 2011; Oye et al., 2012) have proven its relevance in being included in the UTAUT model as a key predictor. This gradually proves that individual anxiety possesses the propensity to accepting relatively novel technologies for job related performance.

The last but not the least is the personality factor experience, mostly referred to as computer experience or technology experience in the literature. This construct seem interesting as it is gradually deviating from being a moderator in the UTAUT model to a predictor. Experience represents a personality construct that references an individual's accumulated skill, practice or familiarity with the usage of a particular object, thing or entity. Willis (2008) defined experience as "the amount of exposure that a user has had to a given technology" (p.18). Ball and Levy (2008) explained computer experience as "an individual's exposure to using computers and the skills and abilities he or she gains through using computers" (p. 7.). Current evidence in technology usage in higher education research by Echeng, Usore & Majewski, (2013); Smet, Bourgonjon, De Wever, Schellens & Valcke (2012); Ling (2014) and Willis (2008), attest to the potency with which experience has assumed in relation to its effect on behavioural intention. The diagrammatic prediction ability of personality factors is presented below.

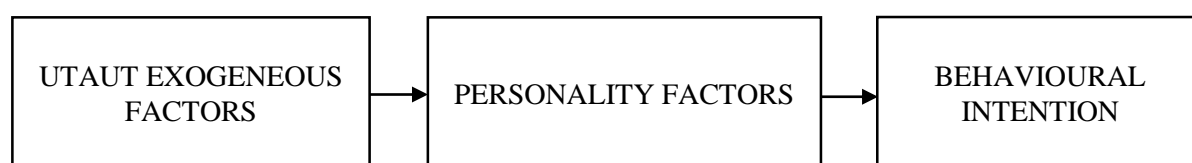


**Figure 2:** Model on ‘Predictive’ effect of Personality factors on Behavioural Intentions

### **Personality Factors as ‘Mediators’ of Exogeneous variables**

Following the modest inclusion of personality factors in the UTAUT model and consequently their potency in predicting behavioural intentions in higher education technology acceptance research, the attempts on the part of some relatively few researchers has been the extension of the predictive effects of these factors to test for indirect effects of the established UTAUT exogeneous factors, particularly where their (personality factors) direct effect on behavioural intentions are significant and stronger. This presents quite an interesting scenario as it further broadens the scope of variable testing and validation in technology acceptance research in higher education, to better understand the complexity of interactions. But indirect effects or regressing the UTAUT exogeneous variables on personality factors is not necessarily a proof of mediating effects; they have to be statistically proven through full mediation analysis (Hair, Hult, Tomas, Ringle & Sarstedt, 2013; Preacher & Hayes 2008). Researchers such as Nassuora (2012), El-Gayar et al., (2011) and Thomas et al., (2013) made some efforts to look at the indirect effect of personality factors on UTAUT latent variables through regression analysis. For instance Thomas et al., (2013) looked at the indirect effect of attitude on all four key constructs of the UTAUT model. El-Gayar et al., (2011) concentrated on the indirect effect of attitude on only effort expectancy and performance expectancy while Nassuora regressed attitude to social influence and facilitating conditions. However, most studies, for instance, Percy & Van Belle 2012; Fidani & Idrizi, 2012; Casdorff, 2014; Mbengo, 2014, El-Gayar & Moran 2016 etc., that even found personality factors to be significant did not include in their analyses test for either the indirect effects or the reciprocating mediating roles of personality factors on the UTAUT variables. This leaves a gap in the complete testing of actual mediation of all the personality factors on the UTAUT exogeneous factors.

In TAM 1, Davies, Bagozzi & Warshaw (1989) and TAM 2, Davis & Wong (2007), all stressed that the effect of Perceive Usefulness (PE in UTAUT) and Perceived ease of use (EE in UTAUT), will be indirect to behavioural intention through attitude. Where individual attitude is strong and positive, they become innovators. Rogers (1962) indicated that innovators are risk takers and audacious without circumspection. Consequently, they are not perturbed by the eventual failure but are rather encouraged by the fact that, they tried a new technology or innovation for the benefit of themselves. In this instance, they shirk the effect of PE, EE, SI and FC (van Raaij & Schepers, 2008) in trying out new technologies. This same idea is conscripted and argued for in this paper in terms of the constructs self-efficacy, previous computer/technology experience and computer anxiety. Logically, when self-efficacy levels of potential users of technology is strong (Asiri, Mahmus, AbuBakar & Ayub, 2012), they will care less about EE, PE and SI in experimenting new technologies, and hence their effects will be indirect. Furthermore, the strong nature and significance of previous computer or technology experience of individuals will relate with their attitude (Karahanna, Agarwal & Angst, 2006) and work in the same direction relieving the effects of PE, EE and SI. Finally in situations where individuals have low technology anxiety levels, they will not be disconcerted by PE and EE in the wake of experimenting with new technology (Albirini, 2006). This paper argues that when contexts of study favours such conditions above, then the effects of the UTAUT exogeneous variables will be indirect and hence can be subjected to mediation analysis through personality factors to verify for significance. If mediation is significant, then in this direction, personality factors assume a mediating role in technology acceptance research. Based on the above justification, this paper theorizes the mediating effects of all the personality factors on the key UTAUT constructs. The figure below shows this relationship.



**Figure 3:** Model on ‘Mediating’ effect of Personality factors on Exogeneous variables

## Discussion and Conclusion

This paper shed light on the possible tripartite role of personality factors that may characterize technology acceptance studies in higher education based on the UTAUT model, in the event of their significance in predicting behavioural intentions. In the initial instance, personality factors serve as ‘the mediated’ effects in the UTAUT model originally postulated by Venkatesh et al., (2003). This represents their indirect role in predicting behavioural intention with their effects fully extricated by the principal exogeneous factors (performance expectancy, effort expectancy, social influence and facilitating conditions) as indicated by the proponents of the UTAUT model. Consistently, most of the previous research in technology acceptance has focused only on the four key determinants of behavioural intention in explaining individual acceptance. Recent studies in higher education technology acceptance research have however prompted the significance of personality factors as competitors in the prediction of use intentions towards technology. These recent findings further conscripts personality factors into the role of actual predictors in the UTAUT model and redefines the whole model approach in determining usage intentions. The consistency with which recent research has recorded gains in the predictive power of personality factors

has really brought to question the former prescription given to their effect as spurious. This has sharply contradicted the earlier stands of Venkatesh et al., (2003). The third role which is not extensively looked at is the 'mediator' function that could characterize personality factors especially when significant in predicting intention behaviour. Unfortunately, researchers who found these factors to be significant in their studies proceeded not to provide further evidence of a possible mediator effect of personality factors on the key constructs in UTAUT. The inclusion of this analysis is imperative, especially in contexts where personality factors are very strong and significant and outperform UTAUT exogeneous constructs (Yang, 2010; El-Gayar & Moran and Lwoga & Komba, 2016). Could there be a reciprocating mediating effect between personality factors and UTAUT exogeneous factors in different context? It will foster understanding of and expound another role that these factors represent in technology acceptance research. This is because, mediating analysis enable researchers to understand a known relationship by exploring the mechanism or process by which one variable influences another variable through a mediator variable. It better facilitates an understanding of the relationship between the independent and dependent variable and clarifies the nature of the relationship (Mackinnon, 2008).

The realization of these triple effects of personality factors in technology acceptance research in higher education will warrant an awakening on the part of authors in future technology acceptance research particularly in higher education, to include them in acceptance studies to improve upon predictive power and accuracy in explaining individual technology acceptance behaviour. Most especially in the area of mediation testing, there is the need to know whether reciprocal mediation exists in different context of studies where the significance of personality factors in predicting behavioural intention is proven. Exploring the tripartite roles of personality factors will help researchers form a preconception of these analyses when embarking on any studies and help them establish the roles exhibited in each study and reported accordingly. This brings specificity in the roles played by these factors in different research scope and contexts, facilitating the ability to conclude succinctly on what type of role(s) they found personality factors to portray in distinct studies and within which context. This further provides a more conventional approach of reporting roles played by personality factors in higher education technology acceptance research, particularly those that are conducted through the lenses of the UTAUT model.

The paper concludes that the dynamism of our society in terms of trending technologies is gradually rendering people to be more techno-centric and hence outlook towards technology is becoming positive. Consequentially, the effect of personality factors may not be constant but rather a swinging pendulum dependent on the context and the nature of the characteristics of subjects involved in a particular study.

## **Implications for Future Research in Higher Education Technology Acceptance**

The exposé provided by this paper could inform authors using the UTAUT model in higher education technology acceptance research to juxtapose the personality factors on the original exogeneous factors particularly to test for any incremental of or otherwise in predictive ability of the model. This is because the explanatory powers of the original UTAUT model was estimated to predict 70% variance in technology acceptance, whereas some studies have only come as close as high as 64.5% (Wang & Shih, 2009), 35.3% without interactions and 39.1% with interactions (Teo, 2011) albeit the confirmation of the

model's reliability and validity (Nassuora, 2012). However, Khechine et al., (2014) and Raman et al., (2014) obtained results of explained variance of 72.7% and 72% respectively. To further improve upon variance explanation and predictive power, Venkatesh et al. (2003) suggested that other explaining constructs should be considered to augment the prediction of intention over what the basic UTAUT model provided.

Future research should not just end at assessing predictive power of personality factors on behavioural intention, but further, test for the level of explanatory power with only personality factors included in the model while excluding the effect of the exogeneous variables and comparing with the original predictive power provided by only the UTAUT exogeneous variables. This will provide an insight into the prediction power provided by both ends in the model which further validates the model.

In addition, future research should test for 'the mediated' effect of personality factors by exogeneous variables. This is key to ascertaining whether the results indicate full mediation to resonate the assertion by Venkatesh et al., (2003) or it is merely partial, or nonexistent in contemporary research.

Finally, future research should test for 'mediating' effect of personality factors on UTAUT exogeneous variables in explaining individual technology acceptance. This is important as the indication of mediation provide an evidence of a pseudo effect that cannot be neglected but still needs to be considered in explaining acceptance determinants. It also proves the fullness or otherwise of the effect. This further makes certain the validity and reliability of the UTAUT model in higher education technology acceptance research.

## **Limitations**

This paper is only a part of a complete research work on LMS technology acceptance in distance education for higher education provision. Thus the proposed tripartite effects will be tested empirically to prove its significance.

The proposed model for testing the tripartite roles of personality factors forms a part of a complete model hypothesized for the main study hence the exclusion of other factors (such as demographic and other moderating factors) and the path relationships in the UTAUT model.

The reciprocating mediating effects on key exogeneous variables in UTAUT can only be tested in studies which produce a significant relationship between the personality factors and the dependent variable, behavioural intention.

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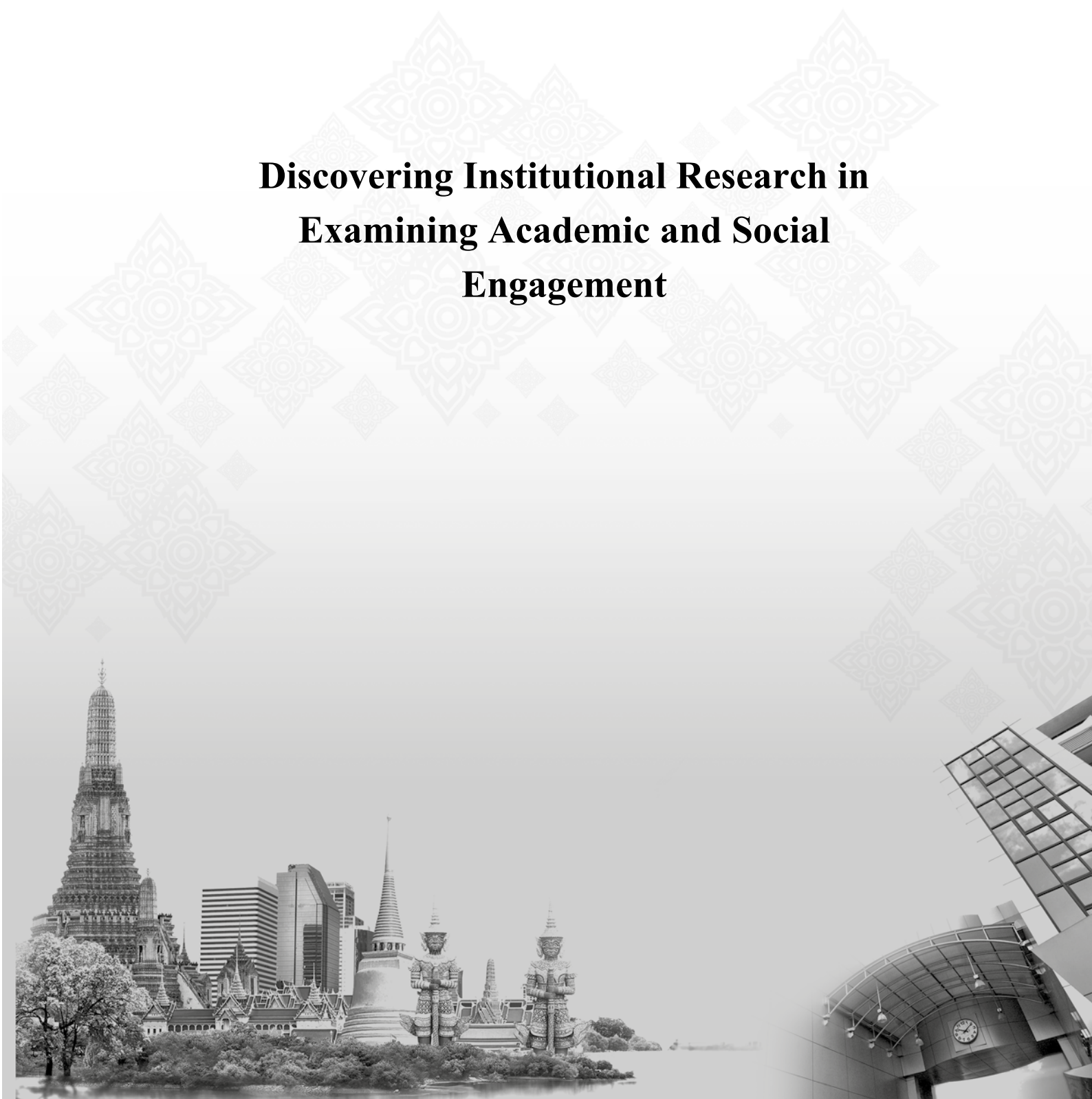
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# **Effects of Organizational Learning and Collective Knowledge on Change Beliefs: A Phil. HEI's Perceptions on the ASEAN Economic Integration**

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## **Abstract**

The paper's premise is on the contribution of a Higher Education Institution's (HEI) culture of learning on the faculty members' formed beliefs or perceptions on organizational changes as a response to an externally driven change (AEC - ASEAN Economic Integration). The paper draws its thesis from concepts of learning organization and cognition through mental models or cognitive frameworks for impending organizational change. Cognitive models or change beliefs are necessary and important in preparation for change as response to an external pressure for change to build understanding and favorable attitude for embracing change. Assumptions were tested from responses of 70 faculty members of a Higher Education Institution in Lipa City, Philippines. The results show that favorable responses on the prospects of value of organizational change are influenced by practice of organizational learning. This is also true with assessing the appropriateness of the institutional changes and the perceived confidence (individually and institutionally) to meet requirements of change. Moreover, collective knowledge of AEC or extent of knowledge about the change strongly determines how responses to the change vary. This points toward the responsibility of the leaders of change to seek and provide adequate information about the change. Results further show that collective knowledge of AEC mediates between the practice of organizational learning and change beliefs. Results provide empirical support on the value of the management's provision of information to individuals in the organization to facilitate learning to develop a collective knowledge which determines the way members' understand the organization's response and consequently determines behavior towards change.

**Keywords:** Change Beliefs, Organizational Change, Collective Knowledge, Organizational Learning

## **Introduction**

Change is an inevitable occurrence in an organization and how to address the challenges of change depends on how organizational members make sense of the images they have about their organizations amidst changes. Mental models are cognition or intellectual frameworks formed from understanding the nature of and reasons for change. These mental models are critical in the early stages of change initiatives which point us in certain directions to make sense of what is going on. Building mental models are about visualizing the new organization and taking a stand on how it should be (Min & Santapparaj, 2011). In the middle of organizational changes is the

management addressing the concurrent impacts and projected consequences of change. The way management control or shape the activities of the organization is critical for its survival if the change is fundamental or for keeping competitive advantage and industry relevance if the change is incremental (Palmer, I., Dunferd, R. and Akin G., 2009). As change agents, failed change for the management may result to loss of credibility and entrenchment of employee opposition to future changes (Smith, 2005).

External environmental pressures are one of the reasons why organizations need to change. These are forces or pressures mandated on the organization from outside agencies or geopolitical relationships necessitating changes in the organizational operations (Palmer, I., Dunferd, R. and Akin G., 2009). Being externally driven, these changes may be formal or informal coercive pressures to commit to certain organizational changes or forced to adopt standards or practices to suit requirements of relevant governing bodies. Organizations need to be able to acquire, analyze and comprehend information related to the current state and future evolution of the environment in which they are embedded (Haase & Franco, 2011). Thus, the need to scan the external environment for information that will help the organization prepare for the impact of changes.

**ASEAN Economic Community Integration.** The implementation of the ASEAN (Association of South East Asian Nations) Economic Community (AEC) integration by 2015 is an example of an external pressure for change directed to its six member nations namely Brunei, Indonesia, Malaysia, Singapore, Thailand and the Philippines. Of great interest for the paper is the impact the integration has on the higher education sector specially in promoting greater educational cooperation among ASEAN Member States by strengthening education in the region to narrow the development gaps, prepare youth for regional leadership and increase the competitiveness of the people (Social dimensions of development in ASEAN, ASEAN Secretariat, 2014)

In the Philippines, these changes are critical to higher educational institutions (HEI's) not only that universities and their employees constantly and continuously need to develop and expand their knowledge and abilities but also education (in the ASEAN region) is steadily and significantly evolving as well (Daif & Yusof, 2011). Since there is a pressure from current environmental challenges, (Philippine) HEI's are finding it necessary to engage in some form of reorganization or change in order to remain competitive (Allen, Jimmieson, Bordia, & Irmer, 2007).

In this regard, framework for ASEAN 2015 (Garcia, online) suggests that Philippine HEIs should undertake a curricular reform responsive to global competitiveness assessment as they look at ASEAN as a market. HEIs should develop a global mindset among graduates through curricular programs responding to both local and international demands, focusing on developing core competencies and emphasizing innovation.

Responding to these changes is a challenge to the management of HEIs. The management as leaders of change should be able to influence the mental models of organization members and ensure that the organization, after changing to adapt to these external pressures (transformation) is within the bounds of the shared vision (Min & Santapparaj, 2011). This is necessary for the management to win organizational members' support for any change initiatives. Developing

understanding of the nature of and reasons for change in the early stages of such an initiative can provide a sound base for subsequent changes and a greater willingness in the part of the organizational members to take risks (Smith, 2005) and support the change. In this regard, greater willingness and support for organizational changes is a function of the formation of attitudes toward the change (Lines, 2005).

The value of well-defined understanding of organizational change in the form of a change message communicated by the management for change initiatives to succeed is evident as cognition and adequate intellectual frameworks are the first steps to behavioral change (Hoover, 2008). This forms the basic knowledge of the change message or understanding the elements of change and consequently influences attitudes of readiness or resistance towards change. This understanding of the elements of change, together with attitudes, skills and motivations are significant components of the organizational environment in which change is to be attempted (Smith, 2005).

**Learning Organization and Change Beliefs.** The paper draws its thesis from concepts of learning organization and cognition through mental models or cognitive frameworks for impending organizational change. The paper emphasizes the contribution of cultivating learning in an organization to the development of cognitive models or mental models pertaining to external pressures to change specifically the belief members has over the changes in the organization. A learning organization is an organization that is organized to scan for information in its environment, by itself creating information, and promoting individuals to transform information into knowledge and coordinate this knowledge between the individuals so that new insight is obtained (Jensen, 2005). Organizational learning starts with environmental scanning to know interpret the external changes that are taking place and consequently determines the organization's ability to adapt to its outside environment (Choo, 2002). Moreover, cognition and adequate intellectual frameworks formed by members of the organization as change recipients are the first steps to behavioral change (Hoover, 2008) recipients formulate precursors (e.g., cognitions, emotions, and intentions), which become part of their decision processes that result in resistance or supportive behaviors ( a. a. Armenakis, Bernerth, Pitts, & Walker, 2007)

One of the premises the paper is working on is that change leaders'/change agents and researchers might be inattentive to some of the human variables that are important during organizational change efforts (Self, D. R., Armenakis, A. A. and Schraeder, M., 2007); one of which is adequate knowledge of the change. Management focuses on issues of attitudes toward the change since they are crucial in the change process, because once formed, attitudes may be extremely difficult to alter (Lines, 2005) but attitudes towards change are only formed after developing understanding or knowledge of the organizational changes. Knowledge creation is the activity by which individuals synthesize and combine existing knowledge to develop new insights and new ideas and viewed primarily as a cognitive activity (Deng, X., Doll, W. and Muhammed, S., 2011).

The contribution of cultivating a learning organization on developing understanding for organizational changes has been of little interest in the literature. Recent review on learning organizations show that studies focus on the contribution of learning organization to organizational performance and effectiveness in Pakistan (Imran, M, Rizvi, M.S.H, Ali, B., 2011); Thailand,

(Mukhtar, 2011); Malaysia, (Rose, R. C., Kumar, N. and Pak, O.G., 2009); India, (Khandekar & Sharma, 2006); and Spain, (López, Peón, & Ordás, 2005). Validation of the construct of a learning organization as well as testing the construct as an assessment tool was done (Yang, Watkins, & Marsick, 2004) and validated in Korea (Song, J.H., Joo, B. and Chermack, T., 2009); and mainland China (Zhang, Zhang, & Yang, 2004). Other papers integrated learning with social capital networks (Rhodes, J. Lok, P., Yu-Yuan Hung, R. and Fang, SC., 2008) and related learning with human resource management (Kuo, Tsung-Hsien, 2011). Little research attention may also be true with the role of cognition in strategic decision making (Iederan, O.C., Cursue, P.L and Vermuelen, P., 2009).

The study is guided by the two conceptual frameworks, the first one drawn from discussions of learning organization by Yang, B., Watkins, K. and Marsick, V. (2004) in their work, *The Construct of the Learning Organization: Dimensions, Measurement, and Validation*. The second framework is from the work of ( a. a. Armenakis et al., 2007), *Organizational Change Recipients' Beliefs Scale: Development of an Assessment Instrument*.

**Dimensions of Learning in Organization.** The use of the DLOQ (Dimensions of Learning Organization Questionnaire) assumes that organizations are organic entities like individuals and have the capacity to learn. The study finds this construct as appropriate as it also refers to organizations that have displayed continuous learning and adaptive characteristics, or have worked to instill these learning characteristics (Yang et al., 2004). The paper assumes that for the members of the organization to develop understanding of changes, the organization itself needs to develop, support and practice learning.

The seven-factor structure provide a useful framework to study learning dimensions since it showed evidence of internal consistency and the construct reliability of the dimensions of the learning organization. The DLOQ will provide a useful tool for researchers to assess dimensions of the learning organization since it represents patterns of learning activities in the organization (Yang et al., 2004).

Creating knowledge organizationally means that tacit knowledge held by an individual is externalized into objective explicit knowledge to be shared and synthesized to enrich subjective tacit knowledge (Nonaka & Toyama, 2005). Knowledge creation is the activity by which individuals synthesize and combine existing knowledge to develop new insights and new ideas making new mental connections (Deng, X., Doll, W. and Muhammed, S., 2011). Understanding what makes up an organization's knowledge base and what factors contribute to or restrict the development utilization of this critical resource is important to the organization's long term viability.

**Cognitive Framework or Mental Models on Change - Change Beliefs.** Cognition is defined as the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. Cognitive models resulting from these processes describe how people's perceptions of, or spontaneous thoughts about, situations influence their emotional, behavioral reactions (Beck Institute for Cognitive therapy, online). The most influential cognitive models explain the effectiveness of decision making in organizations by stressing the impact of these

activated cognitive representations on the decisional outcomes (Iederan, O.C., Cursue, P.L and Vermuelen, P. 2009).

To support the assumption of cognition, the paper will use the construct of Organizational Change Recipients Belief (OCRB) from the work of Armenakis, A. A., Bernerth, J. B., Pitts, J. P., and Walker, H. J., in 2007. They have developed and validated an assessment instrument by summarizing research conducted by organizational scientists and innovation researchers that identify five important change recipient beliefs that practitioners and researchers can use to monitor beliefs throughout the change process. The validated construct is most appropriate since the scale can be used together with other instruments developed to assess organizational conditions including the theme of the current paper which is organizational practices. Second, it can be used during all three phases of organizational change: readiness, adoption, and institutionalization by adjusting the items with minor rewording to be appropriately useful for every phase (A. a. Armenakis & Harris, 2002) ( a. a. Armenakis et al., 2007).

**Hypothesis Development.** Creating knowledge organizationally means that tacit knowledge held by an individual is externalized into objective explicit knowledge to be shared and synthesized to enrich subjective tacit knowledge (Nonaka & Toyama, 2005). Knowledge creation is the activity by which individuals synthesize and combine existing knowledge to develop new insights and new ideas making new mental connections (Deng, X., Doll, W. and Muhammed, S., 2011). This means that a member's information when shared and processed with other member's information becomes knowledge that could improve processes and organizational effectiveness. Understanding what makes up an organization's knowledge base and what factors contribute to or restrict the development and utilization of this critical resource (knowledge) is important to the organization's effectiveness.

Based on the preceding discussion the paper assumes that organization members' understanding of the change message is a function of learning in an organization. To test the assumptions, the following hypothesis will be tested.

Ho<sub>1a-e</sub> Organizational learning has no effects the respondents' change beliefs (valence, support, appropriateness, discrepancy and efficacy) on AEC

Organizations scan the environment in order to understand the external forces of change so that they may develop effective responses which secure or improve their position in the future (Choo, 2002). Vital information from external environment are then assimilated into the organization and shared with the rest of the members. Members of the organization then find its connections and value in their work and consequently sharing formed understanding about the change (change beliefs). Failure to provide the right information to the rest of the organization compromises not only the organization's success in implementing organizational changes but also its ability to appropriately respond to the demands of the external environment.

The paper then assumes the influence of a collective knowledge of an external event (AEC integration) for assessing the value of external pressures for change (change beliefs) on the assumption that this collective knowledge is assimilated in the learning processes of the organization (dimensions of learning organization). The assumption will be tested by treating the collective knowledge of AEC as mediator between organizational learning (dimensions of OL)

and its effect on change beliefs (value, appropriateness, support, discrepancy and efficacy). The assumption is also on the premise of the management's responsibility to provide information from external environment scanning with the extent of performing this task expressed in the amount of collective knowledge. Based on the preceding discussion, the following hypothesis will be tested:

Ho<sub>2a-e</sub> Knowledge of AEC mediates the effects of organizational learning on respondents' change beliefs (valence, support, appropriateness, discrepancy and efficacy) on AEC

**Methods.** To test the preceding assumptions, De La Salle Lipa, a Higher Education Institution in Lipa City, Philippines was identified and its full time faculty members were asked to answer the survey as subjects of the study. A total 70 faculty members participated in the survey where majority (67%) were female. Sixty-six percent (66%) were full time and the rest worked as part timers. Minimum years worked was a year and maximum was 31 years with mean number of years worked at 9 years. The distribution and collection was facilitated by the institution's President's Management Office. Total of 70 respondents provided data for the study.

The predictor variables in the study are the respondents' (faculty members') perception on the extent of practice or support the administration has over the dimensions measuring the culture of learning in the organization. Measure of support for learning in an organization (HEI) was based on 7-dimension construct of learning organization or Dimensions of Learning Organization Questionnaire DLOQ since it provides a useful tool to assess dimensions of the learning organization (Yang, et. al., 2004). Respondents were asked to express their perceptions on the support for each dimension on an 11 point Likert-type scale from never true to almost always true. Each dimension of the construct had 3 items each with alpha test of reliability from 0.85 to 0.91.

The criterion variables of the study are the respondents' (faculty members') set of beliefs on the developing change the AEC implementation has for them and the institution. The study used the modified 5-dimension construct of Organizational Change Recipients Belief Scale (OCRBS) to determine the organizational members' (faculty members) cognitive framework or understanding about the changes upon the implementation of the ASEAN Community Integration. Responses were grouped in terms of their belief on valence, support, appropriateness, discrepancy and efficacy with 3 items each with alpha test of reliability all above 0.90. Respondents were asked to express the strength of their belief on the changes by choosing from an 11 point Likert-type scale from highly disagree to highly agree. Respondents were asked to express the extent of their knowledge about the impact of the implementation of AEC to them, the country and institution. Respondents were asked to express their extent of knowledge by choosing their response from an 11 point Likert-type scale from none to very extensive. The same variable was used to test for mediation between the organizational learning construct and the set of change beliefs.

Majority of the sets of data gathered using self-administered survey were normally distributed while some were approximately normal. Responses were not statistically different between male and female respondents. Significant differences were observed between full time and part time faculty members where part time faculty members' response means were higher than that of the full time faculty members except for perceptions on value, appropriateness, management support and efficacy.

**Results.** Faculty respondents observed continuous learning in the organization to be usually true. The mean response score of 7.323 was far from the ideal response being *almost always true* which is within the range of 8.00 to 10.00. Members of the organization need to engage in continuous learning in order to adapt to changes and effectively contribute to organizational effectiveness. In this case, continuous learning was practiced most of the time but not at all times. To keep the members of the organization informed and updated with key changes coming from outside the organization, there should be a system to make sure that right information is shared. Respondents in the study generally observed that support for embedded systems to be usually true with a mean response score of 7.100. The response was one of the lower response scores among the dimensions and suggests that such practice is not observed all of the time.

## **Knowledge and Change Beliefs on AEC Integration**

Collective knowledge on ASEAN Economic Community Integration among faculty respondents was fair with mean response score of 5.92 which is quite distant from ideal response of very good (8.00 – 10.00). Faculty responded higher on their general knowledge of the AEC and less on the knowledge on its impact. Female members (6.06) responded higher than male (5.61) though not statistically significant. Marked differences were observed between full time faculty members (6.48) who responded higher than part-timers (4.61, p-value = .002).

Faculty response on the probable value of change to adapt to AEC integration was not overwhelming with mean response of 6.74 with 10 as highest possible response score. They find the value associated with the perceived outcome of the AEC to be very probable. This perhaps describes the extent to which the respondents expected the change to enhance career outcomes. They find more value on opportunities to earn more after changes are implemented to adapt to AEC over their expectations of benefits professionally and personally (self-fulfillment). Implementing changes to adapt to AEC integration was regarded by the faculty respondents as an appropriate action and deemed necessary. Response was highest on changes in operations to improve performance of school (7.19). Least response was on the appropriateness of adapting to the change in general.

Lowest response among the change beliefs was on the existence of support throughout the organization from change agents and significant groups in the organization (6.57). Respondents find that the top leaders support the idea of changing to adapt to AEC (6.80) but find the support less from immediate managers and least among peers (6.33). The response on the belief that there is a need for the institution to change to adapt to AEC is highest among the change belief dimensions (7.67). This suggests that there is a belief that there is difference between current and desired performance in the context of AEC and change is necessary to adapt to the demands of AEC. Highest response was on the need to improve our school (7.83) and lowest on the need to improve operations. Response on the perceived capability of the institution to implement the changes to adapt to AEC was not overwhelmingly high at 7.40. The response suggests that the institution's capability to adapt to changes to conform with the demands of AEC is probable but uncertain. Least response among the items was on the individual respondent's self-assessment of successfully performing new job duties aligned with changes from adapting to AEC and highest on their confidence that the school can and has capability to adapt to changes.

**Effects of organizational learning on respondents' change beliefs.** Results on test of hypothesized relationships between organizational learning and respondents' change beliefs show that the latter has significant effect on value of the AEC integration (Beta = 0.275, P-value = 0.023), efficacy of the institution to adapt to change (Beta = 0.291, P-value = 0.013) and has marginally significant effect on the appropriateness of changes to adapt to AEC integration (Beta = 0.228, P-value = 0.059). The results support the assumption that members of an organization see probable value of an impending change in their work and career if they practice organizational learning. This is also true with assessing the appropriateness of the institutional changes to adapt and measure the capability of the institution to adapt to change. The path coefficient is marginally significant at P-value = .05 but significant at P-value = 0.10. Moreover, the perceived confidence (individually and institutionally) to meet requirements of change is also influenced by becoming a learning organization. All these cognitive models or change beliefs are necessary and important to be addressed by the management in preparation for an institutional response on changes upon full implementation of the AEC integration. Tests were done using AMOS Graphics and SPSS.

**The value of knowledge of AEC in respondents' change beliefs.** A major issue for the paper deals with the effect of the extent of knowledge on understanding organizational changes as a response to an external pressure for change, which in this paper is the AEC integration. It is a factor that would set the objectives for change and how this will relate to organizational effectiveness that underlie the organization's (HEIs) long-term relationship to its environment (ASEAN region) define its new character, mission, and direction (A. A. Armenakis, 1999). In this case, knowing the pressures for change (AEC) is as important as building understanding for consequent changes. This is important to find the organization's fit in the changes in the regional environment and what necessary internal changes shall it make to fit if found otherwise.

Results show that collective knowledge of AEC strongly influences all change beliefs with lowest standardized regression weight of Beta = 0.834 for discrepancy and efficacy and highest Beta = 0.959 for appropriateness, all significant at P-value = 0.01 level. Knowledge of AEC also explains 70% to 92% of the variance in all change beliefs.

Though the contribution of information to formation of perceptions on change is obvious, the paper's objective is to develop understanding of the external pressures for change in the context of the organization and not on the knowledge alone. The paper posits that the sum of individual learning or knowledge of the change mediates between the practice of organizational learning and the developed change belief. The management's provision of information to individuals facilitates the learning processes from individuals' acquisition of knowledge, exchange and integration to develop a collective knowledge. This suggests that in the practice of organizational learning, provision of adequate information about the external pressure for change not only increases the probability of understanding the change better but it also builds understanding related to the organization's parameters. The formed change beliefs then become an important knowledge for the organization to appropriately prepare for change. The paper tested knowledge of AEC as mediator between organizational learning as predictor variable and value and efficacy as criterion variable respectively using AMOS Graphics and SPSS.

Beliefs on value and efficiency are the only variables organizational learning has an effect on. Results show that collective knowledge of AEC fully mediates the effect of organizational learning on value. Path coefficient of direct effects between organizational learning and value

(Beta = 0.275) was significant (P-value = 0.023). Moreover, path coefficient of the same variables not only had a reduced regression weight (Beta = 0.122) but also lost its significance (P-value = 0.226) with the introduction of collective knowledge of AEC as a third variable in the hypothesized model. Path coefficient between organizational learning to knowledge of AEC (Beta = 0.250) was also significant (P-value = 0.33) and path coefficient between knowledge of AEC and value (Beta = 0.592) was also significant at .01 level. Moreover, the explained variance in value as criterion variable increased from 7.6% to 40% with the introduction of knowledge of AEC as mediator between organizational learning and value. Mediation was significant using Sobel test (P-value = .0473).

The same was observed with knowledge of AEC as mediator between organizational learning and efficacy. Path coefficient of direct effects between organizational learning and efficacy (Beta = 0.291) was significant (P-value = 0.013). However, path coefficient of the same variables not only had a reduced regression weight (Beta = 0.148 but also lost its significance (P-value = 0.136) with the introduction of knowledge of AEC as a third variable in the hypothesized model. Path coefficient between organizational learning to knowledge of AEC (Beta = 0.250) was also significant (P-value = 0.33) and path coefficient between knowledge of AEC and efficacy (Beta = 0.550) was also significant at .01 level. Moreover, the explained variance in value as criterion variable increased from 8.4% to 36.5% with the introduction of knowledge of AEC as mediator between organizational learning and value. Mediation was significant using Sobel test (P-value = .0499).

Discussion. Key finding of this research is that effectiveness of organizational learning in developing perceptions limited to (1) the probable value of organizational changes as response to an external pressure to change and (2) the efficacy of the organization to respond to changes depend on the collective knowledge about the external pressure for change (AEC integration). The collective knowledge about the reason/s for organizational changes is fundamental to develop members' beliefs and perceptions supportive of change. It is an expression of how much information about the change is provided and a reflection of the managements sensitivity to external pressures for change.

Results show that collective knowledge of AEC fully mediates the effect of organizational learning on value and a direct causality is observed. This suggests that practice of organizational learning is not enough and the extent of knowledge about the change determines how much we understand the organization's response to the change. The paper believes that the information about the change (AEC) is a responsibility of the management as part of their environmental scanning to make the organization updated with current demands in the region. As a learning organization, continuous learning starts with provision of information and dissemination of the same for assimilation in the organization for creation of new knowledge in the form of beliefs. These change beliefs are crucial for the success of change programs of the institution.

Knowledge of the value and appropriateness of changes to adapt to an impending should be created and shared among members of the organization. Change beliefs created in this context develop readiness and acceptance in the part of the employees, thus, making the organization implement change programs with less resistance. Knowledge on the efficacy of the institution to adapt to changes gives the administration ideas on the extent of preparation they need to adapt to the requirements of the change.

To keep the members of the organization informed and updated with key changes coming from outside the organization, there should be a system to make sure that right information is shared. This system should come from the administration as a support for embedded systems capture and share learning (Awasthy & Gupta, 2012). This is essentially expected from organizations capable of integrating technology systems into work to endorse capturing and sharing of learning (Karkoulou, Canaan Messarra, & McCarthy, 2013). With the implementation of AEC integration, organizations need to actively scan the external environments and be able to adjust the working systems within the organization to suit outside requirements (Ismail, 2005). Seeing the effect of work on the entire organization only and not considering the demands of the external environment (Marsick, & Watkins, 2003) may limit effective response to external pressures for change.

Moreover, the importance of supporting inquiry and dialogue in the organization, especially with regard to externally driven issues that could possibly have a considerable impact to the organization is that it encourages the individuals to intuit and interpret their learning into the group context more effectively (Hoon Song, Jeung & Hyoung Cho, 2011). Active support and practice for dialogue enables members of the organization to share and integrate what they know about the change and how it will affect them individually and as a whole, thus, creating a more logical understanding of the external pressures for change. This should also extend to the learning activities of the group rather than on the development of team process to develop shared “pictures of the future” that foster genuine commitment among members of the organization (Yang et al., 2004). This perhaps is most essential when the organization is faced with an external pressure for change and information is quite limited to understand the change.

Moreover, the organizational ability and approach to deal with knowledge and information about external pressures for change depends on how the knowledge leaders’ play their role. Organizational leaders should scan the environment and provide not only information but also opportunities for dialogue or information exchange at all levels to encourage learning and feedback (Yeo, 2006). Organizations trying to develop open and committed employees especially on a period of change should enhance appropriate leadership skills such as transformative leadership behavior to effect change (Bommer, Rich, & Rubin, 2005).

**Limitations and Recommendation.** The generalizations from this study are limited to a particular organization (De La Salle Lipa). However, sampling technique and size is appropriate and covers a diverse set of samples (across 5 colleges) to avoid internal bias which happens when sample is taken for a single source. Perceptions from the respondents were assumed to reflect respective area of work and supervision (college/unit). It is further recommended to conduct the study with more subjects of the study. Including more HEIs in the study will establish level acceptance and practice of organizational learning and also the perceptions on the implementation of AEC integration.

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# Adventure Relaxation and Theatrical Therapy among Older Persons with Depression in Selected Barangays of Dasmariñas City, Cavite

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## Abstract

The burden of depression and other mental health conditions is on the rise globally (WHO, 2015). Philippines have the highest number of depression cases in Southeast Asia (DOH, 2010). The researchers have in mind the possible solution to barriers by reaching out to the older persons in the community to introduce a therapy that may give effective care. This is important to higher educational institutions to be an advocate for engagement in the creation of academic plans for students that help build their skills as global citizens.

The study aimed to determine the effects of Adventure Relaxation Theatrical (ART) therapy among 90 older persons with depression. It consisted of 5 minutes walking and 5 minutes exercise; listening to music for 10 minutes; and charade with one scenario for 10 minutes. Thirty minutes duration per session for three consecutive sessions with 5 days interval. Posttest was done after every therapy and 11 Self-Mood Assessment statements were answered by older persons. Researchers observed facial reaction based on Mood Assessment (Lennox *et al.*, 2004). The therapy was evaluated by the participants after the three sessions. Quasi experimental approach was utilized, data were analyzed using mean, frequency, percentage distribution, standard deviation, probability value, and Wilcoxon signed ranked test. It was concluded that older persons are moderately depressed before and after the ART therapy. It was very good for older persons with depression and obtained a very high evaluation. There is a significant change that shows the level of depression of older persons decreased.

**Keywords:** Adventure, Relaxation, Theatrical, Depression, Older Persons

## Introduction

Depression is a significant public health issues for older adults because their lives may be affected either directly or indirectly. Although there are known effective treatments for depression, the World Health Organization (2015) confirmed that fewer than half of those affected in the world receive treatments. Barriers to effective care include lack of resources, lack of trained health care providers, social stigma and inaccurate assessment. Several successful therapies are available for geriatric depression but seem to be underused.

This study strengthened the quality education in Philippine higher education institutions (HEIs). By social engagement, academics (students, teachers, researchers) working with non-academics (community members, government officials, elderly persons etc.) to analyze and solve social problems in a spirit of continuous mutual learning. It is similar

to engaging in collaborative action-research oriented to social learning (Boothroyd, 2004). Institutions of higher education have much to learn from each other about social engagement benefits, challenges and successful strategies.

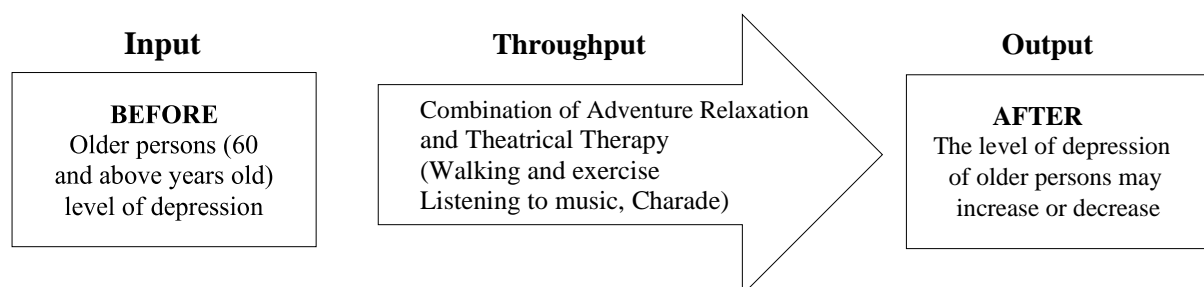
The Adventure, Relaxation and Theatrical therapy (ART) is a caring approach beneficial to clients in terms of building up their confidence, flexibility and adaptability. An important community service where academic moves from the margins of the university to become an integral part of intellectual discovery. The researchers' recent experience in Research and Extension activities show that universities have the potential to make significant contributions to development by engaging with social problem-solving in collaboration with communities and government. It was observed that most of the older adults with depression in the community state a preference for receiving psychologically based treatments rather than medication. Depression may continue to be a worthy of much scientific and applied interest in the years to come. In connection, the researchers have conducted the study to determine the effects of Adventure, Relaxation and Theatrical therapy among older persons with depression in selected barangays in the City of Dasmariñas, Cavite.

## Statement of the Problem

The study aimed to determine the effects of Adventure Relaxation and Theatrical therapy among older persons with depression in selected barangays in the City of Dasmariñas, Cavite. Specifically, the study aimed to answer the following questions: 1) What is the socio-demographic profile of the respondents? 2) What is the level of depression of older persons before and after the adventure relaxation and theatrical therapy? 3) What is the level of effectiveness of adventure relaxation and theatrical therapy among older persons with depression in selected barangays in the City of Dasmariñas, Cavite? 4) Are there any significant changes between level of depression before and after adventure relaxation and theatrical therapy among older persons with depression in selected barangays in the City of Dasmariñas, Cavite?

## Conceptual Framework

Figure 1 shows the conceptual framework of the study. This tackles the effects of Adventure Relaxation and Theatrical (ART) Therapy on the level of depression of older persons (60 and above years old). Input refers to the level of depression prior to ART therapy. Throughput refers to the therapy used in the study through the use of combination of Adventure Relaxation and Theatrical (adapted and modified technique from different literatures) for the purpose of decreasing the level of depression. The output which is the result of implementation of ART therapy to the level of depression of older persons. Increase or decrease level of depression may contribute to an increase or decrease incidence rate of depression among older persons in selected barangays in the City of Dasmariñas, Cavite.



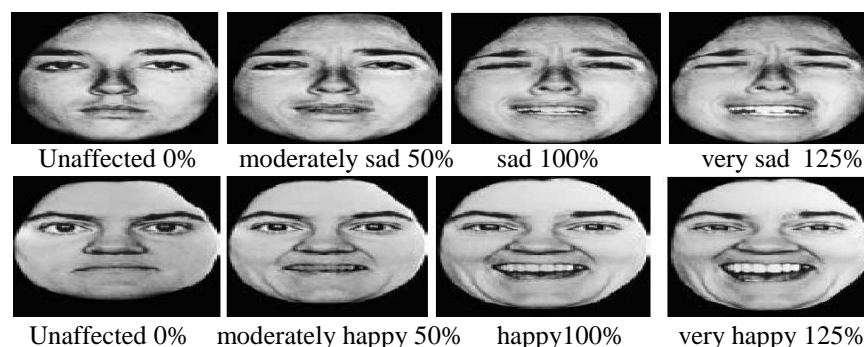
**Figure 1:** Conceptual Framework of the Study

## Methodology

The respondents of the study were 90 older persons with depression who were staying in 17 barangays in City of Dasmariñas Cavite. Quasi experimental approach was utilized specifically the pre test and post test design. The data gathering procedure was conducted from October 2014 to January 2015. Data were statistically analyzed using mean, frequency counts, percentage distribution, standard deviation, probability value, and Wilcoxon signed ranked test.

Prior to collection of data, endorsement to conduct the study was given by College of Nursing, Cavite State University as part of research and extension program. Thereafter, permission to conduct the survey was obtained from the 17 Barangay Captains in the City of Dasmariñas, Cavite. Upon approval, the schedule of the therapy was coordinated with the barangay officials. Initial survey to 200 participants was conducted to find out if they have met the inclusion criteria which includes: 1) agreed to participate in the study; 2) permanent residents of City of Dasmariñas, Cavite; 3) coherent, can read and understand Filipino language; 4) can communicate verbally ; 5) capable of participating in the activities; 6) have experience of depression for the past three weeks based on Self Mood Assessment tool; 7) have agreed to some scheduled interview with the same researcher; 8) living with his/her family and 9) therapy must be done at the same time and place. The exclusion criteria include older persons who were bedridden, with sensory deficit and those who were agitated and hostile.

All 90 respondents passed the inclusion criteria and assessed to have moderate depression based on Self-Mood Assessment tool. Researchers have observed facial reaction based on Mood Assessment (Lennox et al., 2004). The 90 respondents have undergone the Adventure Relaxation and Theatrical Therapy (adapted from different literatures and combined by the researchers as one therapy). It consisted of the combination of five minutes of walking and five minutes exercise; listening to music for 10 minutes; charade with one scenario for 10 minutes with duration of 30 minutes per session for three consecutive session with five days interval. Materials used include headset with MP3 with music of Even I have white hair already (Kahit maputi na ang buhok ko), Green green grass of home, Quando, Quando, Quando. Paper and pentel pen for writing cues to be enacted by the respondents. Posttest was done after every therapy to determine the level of depression and 11 Self-Mood Assessment statements were answered by 90 older persons with depression. The therapy was evaluated by the respondents based on self-made questionnaires after the three sessions



**Figure 2:** Mood Assessment Through Facial Reaction Adapted from: B. R. Lennox\*, R. Jacob, A. J. Calder, V. Lupson And E. T. Bullmore (2004)

## Results

### Socio-demographic Profile of the Older Persons with Depression

Majority of the 90 older persons with depression were in the age of 60 to 65 years old, female, married, elementary graduates, previously employed, belonged to nuclear family with monthly income of 5,000 to 6,999 pesos.

**Table 1:** Frequency and percentage distribution of the socio-demographic profile of older persons with depression in selected barangays in the City of Dasmariñas, Cavite

<b>SOCIO-DEMOGRAPHIC PROFILE</b>	<b>FREQUENCY n=90</b>	<b>PERCENT (%)</b>
<b>Age</b>		
60 to 65	40	44.4
66 to 70	35	38.9
71 to 78	15	16.7
<b>Sex</b>		
Male	44	48.9
Female	46	51.1
<b>Civil Status</b>		
Single	9	10.0
Married	49	54.4
Widow	23	25.6
Separated	9	10.0
<b>Educational Attainment</b>		
No formal education	7	7.8
Elementary	35	38.9
High School	33	36.7
College Graduate	10	11.1
Post Graduate	5	5.6
<b>Previous Occupation</b>		
Self Employed	29	32.2
Employed	37	41.1
Unemployed	24	26.7
<b>Monthly Family Income</b>		
4,999 and below	32	35.6
5,000 to 6,999	34	37.8
7, 000 and above	24	26.7
<b>Type of Family</b>		
Nuclear Family	37	41.1
Extended Family	28	31.1
Single Parent	25	28.8

### Level of Depression of Older Persons before Adventure Relaxation and Theatrical Therapy (ART) in Selected barangays in the City of Dasmariñas, Cavite.

Table 2 shows the level of mood of older persons with depression before the ART therapy. The total mean of  $\bar{x}$  -3.15. SD=0.511 implies that the respondents have experienced moderate depression during the pre-test. National Institute of Mental Health (NIMH, 2013), stated that experiencing depression for more than two weeks, a person may feel symptoms of extreme sadness, hopelessness and thoughts of death or suicide. With this, there was shared

discovery that occurred as the respondents and researchers implement the therapy together and the discovery of new approaches (e.g., academics collaborating simultaneously with community members, leaders and local officials) suited to depressive conditions.

**Table 2:** Level of depression of older persons before Adventure Relaxation and Theatrical Therapy

STATEMENT	PRE TEST MEAN	SD	VI
<i>Over the past 3 weeks I have been feeling:</i>			
- less pleasure on the things I usually enjoy	3.22	.595	MD
- changes on my appetite	3.19	.685	MD
-more difficulty going to sleep	3.23	.654	MD
- more trouble concentrating	3.21	.662	MD
-worried more than ever	3.21	.627	MD
- worried about the past	3.22	.576	MD
- worried about the future	3.19	.598	MD
- finding it harder to socialize	3.09	.593	MD
- more low and less optimistic	3.03	.644	MD
- more isolated and alone	3.04	.634	MD
- less able to cope with everyday challenges	2.96	.718	MD
<b>Total</b>	<b>3.15</b>	<b>.511</b>	<b>Moderate Depression</b>

Legend:

- 1.00 -
- 1.77 Not depressed (NA)
- 1.78 - 2.55 Slightly Depressed (SD)
- 2.56 - Moderately
- 3.33 depressed (MD)
- 3.34 -
- 4.00 Extremely Depressed (ED)

### Level of Mood among Older Person with Depression during Pre Test

Table 3 shows facial reactions of the older persons with depression based on observation of researchers. Pretest shows that all of the participants were moderately sad with mean of 50. Depression is not a normal part of aging (NIMH, 2013). However, when older adults do have depression, it may be overlooked because seniors may show feelings of sadness or grief. According to Boothroyd and Fryer (2004), challenge was when social engagement asked the academic not only to study social problems and the people who experienced them directly, but also to study problems with these people and the various parties who need to be part of the solution.

**Table 3:** Level of mood among older person with depression during Pre Test

SAD MOOD	UNAFFECTED	MODERATELY SAD	SAD	VERY SAD	MEAN
Pre-test	0	90	0	0	50

### Level of depression of Older Persons after the Adventure Relaxation and Theatrical Therapy (ART)

As shown in table 4, the level of depression after the first implementation of ART therapy. The mean ranged from 2.92 - 3.27 indicates that older persons with depression over the past three weeks have experienced moderate depression. The respondents have experienced more troubled in concentrating ( $\chi = 3.27$ ;  $\sigma = 0.650$ ); followed by difficulty going to sleep ( $\chi = 3.26$ ;  $\sigma = .646$ ) and felt less pleasure on the things they usually enjoy ( $\chi = 3.24$ ;  $\sigma = .587$ ). However, older persons felt less able to cope with everyday challenges ( $\chi = 2.92$ ;  $\sigma = .738$ ). The total score of  $\chi = 3.15$ ;  $\sigma = 0.513$  implies that the respondents have experienced moderate depression during the post test 1.

Table 4 presents the level of depression after the second implementation of ART therapy. The mean ranged from 2.77- 3.02 indicates that older persons with depression over the past three weeks have experienced moderate depression. After five days of implementation, the participants became worried about the future ( $\chi = 3.02$ ;  $\sigma = .599$ ); felt more troubled concentrating ( $\chi = 3.00$ ;  $\sigma = 0.581$ ); and became worried about the past ( $\chi = 2.97$ ;  $\sigma = .608$ ). However, older persons felt more isolated and alone ( $\chi = 2.82$ ;  $\sigma = .712$ ); and experienced less able to cope with everyday challenges ( $\chi = 2.77$ ;  $\sigma = .750$ ). The total score of  $\chi = 2.93$ ;  $\sigma = 0.504$  means that the respondents have experienced moderate depression during the post test II.

Table 4 also shows the level of depression after the third implementation of ART therapy. The mean ranged from 2.58- 2.61 indicates that older persons with depression over the past three weeks have experienced moderate depression. However, the mean ranged from 2.44- 2.54 indicates that older persons have already experienced slight depression manifested by worrying more than ever ( $\chi = 2.54$ ;  $\sigma = .721$ ); followed by finding it harder to socialize ( $\chi = 2.54$ ;  $\sigma = .752$ ); and felt less pleasure on the things they usually enjoy ( $\chi = 2.52$ ;  $\sigma = .640$ ). They thought that they were more low and less optimistic ( $\chi = 2.51$ ;  $\sigma = .768$ ); less able to cope with everyday challenges ( $\chi = 2.47$ ;  $\sigma = .737$ ); and more isolated and alone ( $\chi = 2.44$ ;  $\sigma = .766$ ). The total score of  $\chi = 2.55$ ;  $\sigma = 0.629$  means that the respondents have experienced slight depression during the post test III. Robertson & Long, (2008), confirmed that there are numerous positive outcomes for those who continue therapy while many different approaches to community service are being taken, and to some degree universities are documenting and reflecting on their experiences (Fryer, 2004). However, professional institutions contribute to nation building by providing educational experiences to develop technical knowledge and skills at the graduate and undergraduate levels, which lead to professional practice

**Table 4:** Level of depression of older persons after the Adventure Relaxation and Theatrical Therapy.

STATEMENT	POST TEST 1			POST TEST 2			POST TEST 3		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
<i>Over the past 3 weeks I have been feeling:</i>									
- less pleasure on the things I usually enjoy	3.24	.587	MD	2.94	.505	MD	2.52	.640	SD
- changes on my appetite	3.22	.667	MD	2.94	.588	MD	2.59	.763	MD
- more difficulty going to sleep	3.26	.646	MD	2.97	.608	MD	2.58	.749	MD
- more trouble concentrating	3.27	.650	MD	3.00	.581	MD	2.66	.737	MD

- worried more than ever	3.21	.627	MD	2.96	.598	MD	2.54	.721	SD
- worried about the past	3.22	.576	MD	2.97	.608	MD	2.61	.745	MD
- worried about the future	3.19	.579	MD	3.02	.599	MD	2.58	.749	MD
-finding it harder to socialize	3.11	.608	MD	2.91	.681	MD	2.54	.752	SD
- more low and less optimistic	3.06	.642	MD	2.88	.684	MD	2.51	.768	SD
- more isolated and alone	3.00	.670	MD	2.82	.712	MD	2.44	.766	SD
- less able to cope with everyday challenges	2.92	.738	MD	2.77	.737	MD	2.47	.737	SD
<b>Total</b>	<b>3.15</b>	<b>.513</b>	<b>MD</b>	<b>2.93</b>	<b>.504</b>	<b>MD</b>	<b>2.55</b>	<b>.629</b>	<b>SD</b>

Legend: 1.00 - 1.77 Not depressed (NA)  
1.78 - 2.55 Slightly Depressed (SD)  
2.56 - 3.33 Moderately depressed (MD)  
3.34 - 4.00 Extremely Depressed (ED)

### **Level of Mood among Older Persons with Depression after the Adventure Relaxation and Theatrical Therapy based on Researchers Observation on Mood Assessment**

Table 5 shows the facial reactions of the older persons with depression based on observation of researchers. First post test, 80 of respondents were still moderately sad and ten of them became unaffected with mean of 44.4. Second Post test revealed that 74 respondents were moderately sad and 16 were unaffected with mean of 33.8. Third post test revealed that 70 respondents were moderately sad and 20 were unaffected with mean of 30.55. Every after therapy, the level of mood of older persons in terms of sadness was decreasing. It implies that the level of depression was decreased after the ART therapy based on respondents' facial reactions.

**Table 5:** Level of mood among older persons with depression during the post test

<b>SAD MOOD</b>	<b>UNAFFECTED</b>	<b>MODERATELY SAD</b>	<b>SAD</b>	<b>VERY SAD</b>	<b>MEAN</b>
Post test 1	10	80	0	0	44.44
Post test 2	16	74	0	0	33.88
Post test 3	20	70	0	0	30.55

### **Level of depression before and after the Adventure Relaxation and Theatrical Therapy among Older Persons with depression in selected barangays in the City of Dasmariñas, Cavite**

Table 6 shows the pre test which revealed the mean score of 3.15 which indicates moderate depression. In post test I, results revealed mean of 3.15 which indicates moderate depression while in post test II, results revealed mean of 2.93 which indicates moderate depression. In post test III, with mean of 2.55 which indicates moderate depression. The finding of the study implies that the older adults with depression were moderately depressed before and after the ART therapy.

**Table 6:** Level of depression before and after the Adventure Relaxation and Theatrical therapy among older persons with depression in selected barangays of City of Dasmariñas, Cavite

<b>INDICATOR</b>	<b>MEAN</b>	<b>SD</b>	<b>VI</b>
Pre Test	3.15	.511	MD
Post Test I	3.15	.513	MD

Post Test II	2.93	.504	MD
Post Test III	2.55	.629	MD

Legend:

1.00 - 1.77	Not depressed (NA)
1.78 - 2.55	Slightly Depressed (SD)
2.56 - 3.33	Moderately depressed (MD)
3.34 - 4.00	Extremely Depressed (ED)

### Level of Effectiveness of Adventure Relaxation and Theatrical (ART) Therapy among Older Persons in Selected barangays in the City of Dasmariñas, Cavite

Table 7 shows the effectiveness of ART therapy among older persons with depression. The mean ranged from 3.51 to 3.24 indicates very high effectiveness of therapy. Majority (61.1 %) of the respondents were particularly interested in the therapy and 68.9 percent were happy while doing the therapy and felt at ease after the therapy, respectively. On the other hand, 54.4 percent like to continue the therapy while 46.7 percent was less bothered. Only 46.7 percent became happy being with others during the therapy and lastly 64.4 percent therapy had boost their energy. The overall percentage of 64.4 percent indicates that the ART therapy was very good for older persons with depression. This implies that participants had a very high evaluation based on effectiveness of the therapy.

**Table 7:** Level of effectiveness of Adventure Relaxation and Theatrical therapy among older persons in selected barangays in the City of Dasmariñas, Cavite

STATEMENT	POOR		FAIR		GOOD		VERY GOOD		MEAN	SD	V.I.
	f	%	f	%	f	%	f	%			
Interested in the therapy			9	10.0	26	28.9	55	61.1	3.51	.674	<b>VH</b>
Happy while doing the therapy			9	10.0	28	31.1	53	68.9	3.49	.674	<b>VH</b>
Feel ease after the therapy			9	10.0	28	31.1	53	68.9	3.49	.674	<b>VH</b>
Like to continue the therapy			11	12.2	30	33.3	49	54.4	3.42	.703	<b>VH</b>
Happy being with other while doing therapy			16	17.8	32	35.6	42	46.7	3.29	.753	<b>H</b>
These therapy boost energy			15	16.7	38	42.2	37	41.1	3.24	.724	<b>H</b>
It reduced bothering			12	13.3	34	37.8	44	48.9	3.36	.708	<b>VH</b>
<b>Total</b>			<b>9</b>	<b>10.0</b>	<b>23</b>	<b>25.6</b>	<b>58</b>	<b>64.4</b>	<b>3.40</b>	<b>.638</b>	<b>VH</b>

Legend:

1.00 - 1.77	Poor	Very Low Effectiveness (VL)
1.78 - 2.55	Fair	Low Effectiveness (L)
2.56 - 3.33	Good	High Effectiveness (H)
3.34 - 4.00	Very Good	Very High Effectiveness (VH)

### **Significant Changes between Level of Depression Before and After Adventure Relaxation and Theatrical Therapy among Older Persons with Depression in selected barangays in the City of Dasmariñas, Cavite**

As shown in Table 8, the level of depression before and after post test 1 of ART therapy among older persons with depression has significant changes with computed Wilcoxon Signed Rank Test of 0.429. The probability value 0.668 was greater than the critical value at 0.05 level ( $P < 0.05$ ). Therefore, in the first therapy, the null hypothesis of there was no significant changes between level of depression before and after ART therapy was accepted. This indicates that there were no changes in the level of depression of older persons with depression before and after the first therapy.

Table 8 presents the computed Wilcoxon Signed Rank Test of 5.249 and p-value of 0.000 indicates that the level of depression before and after post test II of ART therapy among older persons with depression has significant changes at 0.05 level. The null hypothesis was rejected. This indicates that there were significant changes in the level of depression of older persons before and after the second therapy.

Table 8 shows the computed Wilcoxon Signed Rank Test of 6.788 and p-value of 0.000 indicates the level of depression before and after post test III of ART therapy among older persons with depression has significant changes. In the third therapy, the probability value 0.000 was lesser than the critical value at 0.05 level ( $P < 0.05$ ), the null hypothesis was rejected. There was a significant decreased in the level of depression among older persons with depression after the therapy as compared to the result before the therapy.

**Table 8:** Significant changes between level of depression before and after Adventure Relaxation and Theatrical Therapy among older persons with depression

<b>VARIABLES</b>	<b>MEAN</b>	<b>SD</b>	<b>WILCOXON SIGNED RANK TEST</b>	<b>P- VALUE</b>	<b>REMARKS</b>
Pre test	3.15	0.511			
Post Test 1	3.15	0.513	0.429	0.668	Accept Ho
Pre test	3.15	0.511			
Post Test II	2.93	0.504	5.249	0.000	<b>Reject Ho</b>
Pre test	3.15	0.511			
Post Test 3	2.55	0.629	6.788	0.000	<b>Reject Ho</b>

## **Conclusion and Recommendation**

### **Conclusion**

Older persons are moderately depressed before and after the Adventure, Relaxation and Theatrical therapy (ART). This therapy was very good for older persons with depression and had a very high evaluation based on effectiveness of the therapy. There is a significant change between levels of depression before and after ART therapy among older persons with depression. The older person's depression decreased after Adventure, Relaxation and Theatrical therapy.

## Recommendations

Based on the outcome of the study, the following recommendations were made:

- The older persons need to practice individually or in group settings some exercise classes, dancing and outdoor adventures that may offer many therapeutic benefits. Having an in depth view of the phases of life they are experiencing may allow them to cope with these changes in positive manner.
- The Higher Institutions should include this Adventure Relaxation and Theatrical therapy in their extension services and programs for elderly people in the community. More researches and extension activities showing the potential of colleges and universities to make significant contributions to development by collaborating with communities and government.
- Trainings on Adventure Relaxation and Theatrical therapy may be of great help to assist and support an aging person to be happier at home. Family members should attend some workshops and trainings about geriatric care that may help elderly from being lonely and isolated.
- The Community health care provider may utilize the combination of Adventure Relaxation and Theatrical therapy for reducing depression among older persons and may add in preparing therapeutic activities for the elderly in every *barangays*. Community health workers should reach out senior citizen groups for the prevention of depression. They may also encourage those older persons to visit Rural Health Units for consultation, screening and treatment.
- The future researchers may continue another study in other areas in the Philippines that would help to reveal valuable findings that can be a good proof of improving health conditions in the country.

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# **Assessing Undergraduate Students' Research Experience at De La Salle Lipa Philippines**

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## **Abstract**

This study investigated the college research student's experiences at De La Salle Lipa at the time when research competes with their course requirements and extra-curricular activities. A questionnaire was administered to graduating students of 2015 in their exit interview and after completion of a research project. The study sought to determine the relationship between experience and satisfaction and sought to establish if quality of supervision, skills development, social and intellectual climate, clarity of goals and infrastructure support, predict overall satisfaction of students on their college research experience. Results show that students are well satisfied with the research services of the institution and their advisers. However, low degrees of agreements were assigned by the respondents to infrastructure support and in intellectual and social climate. Basic descriptive statistical regression coefficients shows that each of the predictor variables had a significant relationship with overall satisfaction but only the frequency of research supervision had no significant effect on the overall satisfaction of college research experience of the respondents. Quality of supervision appears to have a very weak relationship although relationship is significant and has an effect on overall satisfaction of students. Research skills and development has a significant relationship with overall satisfaction on quality of supervision. The strength of the relationship among variables appears to have significant relationship with overall satisfaction and strength of the predictors range from weak to strong. Recommendations were made to address results of this study.

**Keywords:** Undergraduate Research, Quality of Supervision, Satisfaction

## **Introduction**

### **Background of the Study/Review of Related Literature**

Of the many research studies on student outputs, the overall assessment as to the experience, environment and gains from research maybe the most relevant to Higher Education Institutions in determining the service quality that they provide to their stakeholders. Many universities conducted research experience survey to check if the program has significant effect on professional and personal development of the students.

The College of Business Economics Accountancy and Management (CBEAM) is currently revising its Research Manual to better serve its students. A committee was formed to evaluate the current practices and policies of the college and to recommend solutions to problems that may be raised. Hence, series of seminars and mentoring programs were initiated

by the College in coordination with the Office of the Research and Publications (ORP) to help faculty in charge of research to continuously improve the quality of research outputs of students and provide a climate that is both intellectual and social through infrastructure support and improved quality of supervision. However, for the past years since the inception of business research, assessment on the effectiveness of the mentoring programs and student's perception on research has not been conducted.

The study is timely and relevant as results of the study will benefit the department in identifying key factors that affect research output and gains from the research experience will serve as a basis for future direction of the student research program. Likewise it will enable the administrators to focus on student learning outcomes and their estimate of gains across academic areas as well as assess the quality of undergraduate programs, institutional resources and faculty productivity in terms of research mentoring. Information that can be obtained from the respondents will help administrators, faculty members, students and others to improve the conditions that contribute to student learning and development and to the quality of research experience that are considered as a high impact in student's learning and career choice.

The aim of this study was to assess the CBEAM student's research experiences in terms of quality of supervision, skills development, social and intellectual climate, infrastructure support, clarity of goals and their overall satisfaction and determined if the aforementioned predictors relate to their overall satisfaction. The proponent sought to establish if quality of supervision, skills development, social and intellectual climate, clarity of goals and infrastructure support, predict overall satisfaction of students on their college research experience.

## **Review of Literature**

The initial effort to understand undergraduate experiences is to assess the student-reported gains, research design, methods and analysis, and their relationships with mentors and peers. An instrument was developed by the Australian Council for Educational Research and Graduate Careers council of Australia but only focused on evaluating postgraduate research and research masters in a variety of disciplines (Ainly, 2001, Marsh et.al, 2002, Kiley & Mullins 2003, Protorius et. al, 2003 Ginns et.al, 2004, Jaarsma et. al 2009). Their studies reported a conceptual framework for post graduate studies and its success or lack of it. Jaarsma (2009) provided a set of questionnaire for undergraduate research experiences, for which this study is anchored on, which includes supervisor, skill development, climate, infrastructure, clarity and overall satisfaction items. His study yielded a validated questionnaire for evaluating undergraduate research experiences but was only able to limit the focus on educational experiences. He posits that there are other variables such as student's motivation for undertaking research was not included in the validated questionnaire and other factors affecting research outcomes. David Lopatto (2010) believes that there are positive effects of an undergraduate research experience on student learning, attitude and career choice and therefore universities must provide a standard set of potential learning gains for evaluation by each student respondent. These gains, he said include the research skills and personal development. Lopatto (2009) believes that undergraduate researchers learn tolerance for obstacles faced in the research process, how knowledge is constructed, independence, increased self-confidence, and a readiness for demanding research. These benefits are an advantage in any career path.

According to studies, one of the major challenges cited by students revolves around the fact that supervisors generally lacked time to engage with the students (Garwe, 2015). Some complains about the infrequent or erratic contact with supervisors who may be too busy with administrative or teaching responsibilities or may have too many students and are often away from the university (Ismail & Abiddin, 2011). As students are pressured to perform high quality research added with a pressure to complete on time, advisers must be able to provide assistance and be available for consultation. It is also said that research supervisors must be able to uncover the concepts that they hold and examine them alongside with other supervisors or in the case of De La Salle, with their teachers in charge. Peer hearing and support, mentoring and learning are appropriate when advising students on their proposals (Lee, 2007). The goal is to conduct high-quality and original research outputs (Karukstis, 2010).

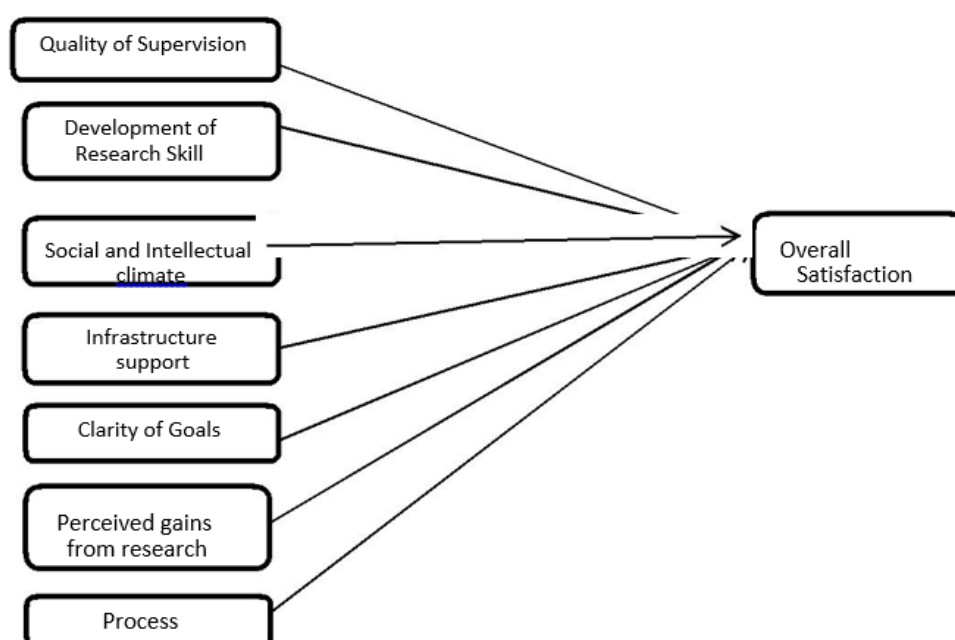
When creating a good study, students must be able to understand the importance of the research process. Creating knowledge in an active social process which the students need to practice and it is not in which student becomes spectators (Love & Love, 2015). Relationships with advisers must be established too if one wish to complete their requirements. The quality of students' relationship with their mentor and the amount of time spent with their mentors are strongly correlated with their personal gains, (Therny, 2008) although according to studies, their professional socialization gains and overall satisfaction is not. Obviously, less time and poor quality research experience may have negative consequences for students. Relationships between a graduate student and an academic supervisor is critical to the success of the learning experience and sense of satisfaction of both participants, development of research skills and shaping of successful career trajectories of both (Chiappetta-Swanson, 2011)

## **Theoretical/Conceptual Framework**

Jaarsma et. al. (2009)'s framework combined the elements of factors suggested by Killey and Mullins (2003)'s and PREQ which consists of factors influencing the postgraduate research experience. It consists of factors as student characteristics, environment, processes, and outcomes.

The Post Graduate Research Experience Questionnaire (PREQ) in evaluating Ph.D. students' experiences includes factors regarding supervision, clarity of goals, social and intellectual climate, infrastructure support as well as outcomes comprising generic skills development and overall satisfaction. The PREQ outcomes proved to be associated not only with the quality of supervision but also with other factors of the learning environment, such as intellectual climate, infrastructure and the frequency of student-supervisor contacts (Ginns, et.al, 2004). Jaarsma et. al (2009) used the frameworks in exploring experiences and learning outcomes in undergraduate research despite being aware of the potentially substantive differences between postgraduate and undergraduate research experiences in setting, duration, assessment and outcomes. Jaarsma (2009) believe that there are items in the questionnaire that has no substantial difference in terms of the effect and importance of an undergraduate research. The important issue is the impact this has on the quality of students' overall experience.

## Conceptual Framework



**Figure1:** Operational Framework for assessing undergraduate research experience, environment, gains and overall satisfaction of research students of De La Salle Lipa

The framework in Figure 1 illustrates the factors that relate to overall satisfaction of the undergraduate research students such as quality of supervision, development of research skill, social and intellectual climate, infrastructure support, clarity of goals, perceived gains from research and process. Quality of supervision focuses on students' perceptions of the availability of supervision, their perceptions of the support, guidance and feedback provided by their supervisors while development of research skills refers to the scale relating to skill development as students' problem solving skills, written work, analytic skills, work planning and tackling unfamiliar problems. Infrastructure support refers to resources in departments, such as necessary equipment, technical support, library access and space. These are students' perceptions of the infrastructure in which they are studying and the extent to which students feel that they had access to an environment that would support their learning in terms of physical and financial resources. Social and intellectual climate include the development of collegiality and the idea of collective responsibility while clarity of goals pertain to students' perceptions of how well they felt they understood the standard of work required in their studies and in their theses and how they are able to gain in the process. These variables are believed to influence overall satisfaction of undergraduate research experience at De La Salle Lipa College of Business Economics Accountancy and Management.

## Methodology

### Research Method

Descriptive research design was used to describe the undergraduate research experience, such as quality of supervision, infrastructure support, social and intellectual climate, perceived gains, and process. A survey was conducted to all CBEAM research students who completed their theses between June 2014 to March 2015. The study used the questionnaire developed by Jaarsma, Debbie and company in 2009 for undergraduate research internships, which has been validated by the latter using confirmatory factor analysis method. There were adjustments made however on the questionnaire after validating the results of their study, thus, producing a validated questionnaire consisting of 23 statements and the gains from research and overall satisfaction items which was likewise validated in the PREQ used by Australian Universities. The questionnaire invites a response on a 5-point Likert Scale to determine their level of agreement on the statements with a two open ended questions on the best aspects and what needs improvement included to support the results of the study. All graduate students from the ten programs of CBEAM (Batch 2015) were asked to participate in the survey. Questionnaires were attached to the exit interview forms for graduates to guarantee responses. Thus, a 99% response rate was achieved for this survey. Of the 510 graduates, only 430 experienced doing research or has completed their research projects. BS and Certificate in Entrepreneurship was excluded from the sample participants because of the nature of their paper. Their paper requires a feasibility study and a business plan that is distinct from the other course's final projects. Although their opinion matters, for this study, only those with the same type/nature of research were considered. Profile of students was not included in the analysis of the relationship with overall satisfaction as majority belongs to almost the same age bracket.

Descriptive statistics such as mean and standard deviation and multiple linear regression analysis was adopted to explain the relationship and impact of the seven factors (as independent variables) and the overall satisfaction as dependent variable.

## Results

### Descriptive Statistics Of Participants

Majority of the participants are female ( $N_{female}=313$ , 72.3% and  $N_{male} = 117$ ; 27.2%) age ranging from 20-22 years of age ( $N_{age}= 334$ ; 77.1%) and at least 18% falls under 20 years of age and single (99.1%). Participating respondents are from graduates of Accountancy ( $N_{BSA}=115$ ; 26.6%), Accounting Technology ( $N_{BSAT}=58$ ; 13.4%), Economics ( $N_{BABE}=4$ ; .9%), Financial Management ( $N_{BSFM}=102$ ; 23.6%), Marketing Management ( $N_{BSMM} =87$ ; 20.1%), Legal Management ( $N_{BSLM} = 33$ ; 7.6%), Management Technology ( $N_{BSMT}=29$ ; 6.7%) and Master in Management Technology ( $N_{MMT} = 2$ ; .7%)

Overall, respondents agree in all statements referring to quality of supervision ( $M = 4.08$ ;  $SD = 0.48$ ); Skills ( $M=4.16$ ;  $SD = 0.48$ ) Climate ( $M=3.96$ ;  $SD = .51$ ); Infrastructure

(M=3.90;SD=.55); Goals (M=4.09; SD = .53); Gains (M= 4.18; SD .50); Process (M=4.05; SD = .50) and Satisfaction (M=4.07; SD = .55).

**Table 1:** Overall Mean of Predictors

	Mean	Std. Deviation
Supervision	4.08	.48003
Skills	4.16	.48253
Climate	3.96	.51257
Infrastructure	3.90	.55147
Clarity	4.09	.52556
Gains	4.18	.50963
Satisfaction	4.05	.54743
Process	4.07	.49651

Specifically, respondents agree that the supervision is available when needed and that advisers make real effort to understand difficulties and provide additional information to help the students in their research endeavors. Students believed that they were given good guidance, provided with helpful feedbacks and received good guidance in literature research.

In terms of skills, students agree that they learned to develop their ideas and are able to put them in writing. They agree as well to a little extent that they were able to plan well for the thesis or were able to develop good oral communication skills but are confident that their written communication skills were improved. Subjects also agree that they felt confident about tackling unfamiliar problems as they developed working collaboratively or independently on their thesis activities.

For social and intellectual climate, the graduates of 2015 are a little convinced that the department was able to provide opportunities for them to keep in contact with the other undergraduate students and to be immersed in a research culture and that some research students are supportive and encouraging. The environment and infrastructure support for research was given a little less than the average responses but overall they agree that the school provided for opportunities for social contract and were made sure that the research tasks are able to be integrated into the department/s or social community activities. The department likewise provided opportunities for students to be involved in the broader research culture as perceived by the respondents. The research ambience also stimulates work because it makes them feel the support of the department through the infrastructure for research works provided by both the library and the college. They agree to a little extent however on accessibility to suitable working space, technical support being available, common meeting place and computing services as well as facilities to such not to mention the good seminar programs initiated by the department for the undergraduate research students.

Respondents believe that they are given access to suitable working spaces and technical support that they need. Meaning they are given proper venue for research as well as journal subscription relevant to their research endeavors. They agree to a little less than the average on the subject of a good seminar provided for undergraduate students.

Because of the trainings provided by the department, students were able to understand the work expected of them in the conduct of their research and understood the required level for the research report. Through these, respondents realized the importance of research in the college and in their future careers as they understand now the requirements of the college. They see now that research is contributing in some way to big picture issues. As a result, they were able to develop an ability to work collaboratively with other researchers or independently. Respondents agree as well that research has developed their problem-solving skills.

With research, students were able to discuss with others their ideas in research and try to see in their own mind how all these ideas fit together. Everyone agreed that ideas that arise from their research often set them off on train of thought on their own or that once they start working on a topic, they are able to take off on the subject with ease. Often, they said, that they wonder whether the work they are doing is really worthwhile and feels the importance of research being integrated with their existing knowledge and topics in the field.

Overall, respondents believed that they were given guidance and support in their research experience in DLSLS and are satisfied with the quality of services and facilities of the school and skills earned from the experience.

## **Frequency Of Consultation And Venue**

Fifty eight percent (58%) of the students meet with their advisers weekly ( $N_{\text{Weekly}} = 248$ ) or at least every two weeks ( $N_{\text{Every2-3weeks}} = 78$ , 17%). Those that frequent their advisers weekly are from the Accountancy, Financial Management and Marketing Management while some others daily. The number students differ as the top three courses also happen to be the most populous in the college. There are some who have not seen their adviser but not enough to affect the results.

There are some students who were not able to see their advisers face to face but would communicate with them through telephone. Apart from face-to-face consultation, the Accountancy Marketing Management and Financial Management students consult through phone (33%) with their advisers who may not be around during their scheduled meetings while around 29% of the population does not. Unlike the frequency of face-to-face visits, only 18% of the students use telephone conversations with their advisers at least weekly or every 2-3 weeks.

Another alternative source of communication for students would be through E-Mail. Thirty percent (30%) of the respondents use E-mail as a means to communicate with their advisers for consultation. They do this every week and some do not use this method although

some still email their advisers every 2-3 weeks. It can be seen as well that the top three courses such as accountancy, marketing and financial management students send email to their advisers. About 28% of the respondents however do not use email for advice maybe because they prefer face-to-face communication.

More students rely on their group members or other groups for consultation in the absence of the advisers. Forty percent (40%) meet with advisers and other students in a group to discuss research related issues weekly while 17% meet daily while 20% meet at least every two to three weeks for brainstorming.

In terms of receiving guidance from fellow researcher in situations not organized by their advisers, TIC, or faculty, it seems that student rely on each other and voluntarily meet for the improvement of their paper and not so much on the initiative of the TICs or faculty advisers. Forty four percent (44%) of the respondents meet weekly for their research endeavors while some meet every two weeks to finish their tasks.

## **Analysis**

Basic descriptive statistical multiple regression analysis show that each of the predictor variables had a significant relationship ( $p < .01$ ) with overall satisfaction but only the frequency of research supervision had no significant effect on the overall satisfaction of college research experience of the respondents. Quality of supervision appears to have a very weak relationship although relationship is significant and has an effect on overall satisfaction of students. ( $R^2$  0.132). Research skills and development has a significant relationship ( $p < .01$ ) and has a 22.9% effect on overall satisfaction with quality of supervision. The strength of the relationship among variables appear to have significant relationship with overall satisfaction and strength of the predictors range from weak to strong ( $R^2$  .229 - .510) but the change in  $R$  appears to be decreasing as the strength of the variables are getting stronger. It can however be concluded that the population sample is significant enough to predict outcomes.

Results show the variability of the overall satisfaction on college research experience is accounted for by the predictors ( $R^2$  - .618) such as process, supervision, infrastructure, gains in research, skills, social and intellectual climate and clarity of goals. This means that 61.8% of the overall satisfaction can be explained by process, supervision, skills development, and climate, perceived gains from research, infrastructure support and clarity of goals. Beta coefficient shows that quality of supervision (.115, climate (.272), infrastructure (.223), gains (.218) and process (.161) significantly influence overall satisfaction. Skills (.002) does not significantly affect overall satisfaction with a  $p > .005$ .

## **Conclusion and Recommendation**

Supervision and mentoring are common expectations for all regular employees in an institution. This, probably, is considered the most satisfying and personally rewarding when students rely on their intellectual contributions. And while everyone agrees that confidence of students on the knowledge and skills of faculty are high when seeking advice for intellectual advice, still, quality of supervision and quantity of time is still imperative if one wishes to produce quality research projects for undergraduate students.

The purpose of this study was to assess the experience and satisfaction of undergraduate students who have completed their research to determine the quality of services provided by both faculty and administration in student research. Results show how satisfied the students are with their faculty mentors who were with them in their research journey. Students agreed that they were given basic skills in writing their thoughts or opinion backed up by evidences and literature reviews despite the pressure of time, pressure to produce high quality research and pressure to complete the requirements on time. Students were able to develop their oral and written communication skills in the course of gathering data and presenting them in thesis format alongside with the ability to solve problems systematically. This is the same as the study of Heather Therny and Sandara Laursen (2009) from University of Colorado. It is stated that the “quality of student’s relationship with their mentor on the amount of time they spend with their advisers was strongly correlated with their intellectual gains, though not on their professional socialization gains and overall satisfaction with the research experience”. Students perceived that the climate for research is conducive but thinks that social interaction or contribution to the experience of their co-researchers may not be as satisfying. This is in contrast with their frequency of student-adviser interaction where they meet weekly for this purpose. The frequent meeting should have developed their social and intellectual climate and learn to work with groups as this is the objective of research in the first place.

The scores assigned to social and intellectual climate were lower than the other variables together with the infrastructure support in terms of access to computing services or venue for research. It is important however that institutions realize that development of research skills and shaping of successful career trajectories lie on the ability of the school to provide quality services and structure that entices students to learn further (Chiapetto et. Al 2011). Collaborative learning and creating knowledge in an active social process must be incorporated in the syllabus or curriculum so as to advance the student’s research capabilities not only in writing but also in interacting with society.

## **Recommendation**

Infrastructure support and research climate were marked the lowest in terms of student’s perception on the variables given. To address these concerns, the school must be able to provide more seminars on research capability to promote a culture of research in the campus. A research management system must also be developed so students can interact with each other online in the absence of a physical avenue for such and avoid duplication of research works. Activity reports and progress must be included in the evaluation of student participation in research. Further research on the link between undergraduate research experience of alumni and their professional advancement is recommended to determine the research experience relevance, and the mechanism that goes with it, in his/her profession.

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# Overview of Peer Review Assessment for Mechanical Design Process Project in Universiti Tenaga Nasional Malaysia

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## Abstract

This paper presents an overview of the current Peer Review Assessment and its implementation for the module MEMB322 Mechanical Design Process in the Mechanical Engineering Department, College of Engineering, Universiti Tenaga Nasional (UNITEN). The module mentioned is basically a project based module and has learning outcomes that are heavily correlated to specific requirements set by the Engineering Accreditation Council (EAC) in Malaysia. The paper put forward a few issues concerning the peer assessment method and suggests recommendations to improve them. These recommendations are drawn to cater to the evaluation of students' performance in functioning effectively as an individual as well as an effective group member with the capacity to be a leader. Problems encountered during the implementation stage are discussed in this paper.

**Keywords:** Peer Review Assessment, Outcome Based Education, Engineering Education, Learning Outcomes

## Introduction

Engineering education provided by Higher Learning Institutions deals with transfer of knowledge, expertise and experience that are related to professional practices in the Engineering field. With the introduction and implementation of Outcome Based Education (OBE) in all engineering courses in Malaysia, students enrolled in engineering courses are to be equipped with balanced skills upon graduation. (Abdul Halim et al., 2014) stated that the engineering education these days focuses around many theories and fundamental knowledge. However, the author also suggested that together with those undeniably important theories and fundamentals, soft skills must also be looked at equally and taught during the 4- year program.

In order to facilitate the tertiary educators to gauge the performance of the individual student in the group, peer review and assessment methodology are often employed to distribute the marks among the individual. According to (Kennedy, 2005), peer assessment is referred as any form of approaches where the students are required to assess their group members' relative contribution to the project they had worked on. On the other hand, (Tropping, 1998), in his paper, describes that the peer assessment as "an arrangement in which individuals consider the amount, level, value, worth, quality, or success of the products or outcomes of learning of peers of similar

status". Hence, it can be seen that peer assessment has been playing an active role in enhancing students' learning experience, understand students' perception towards the assessment process, and to help educators to achieve the learning outcome of a module.

The peer assessment is not a new assessment method in the university, and academics have been looking how peer assessment affects students' experiences in learning. Recent research in peer assessment includes the impact of peer assessment on student engagement and experiences (Jones, 2016), (Sun, et al., 2015), blending the peer assessment with online learning (Lai, 2016), (Phillips, 2016), and performance of constant feedback through peer assessments (Schultz, 2015).

Looking into the peer assessment process in the Engineering, various types of assessment methods have been adopted to suit for various levels of students in achieving in the stipulated outcomes in the modules. Among them includes the research into the peer assessment in the engineering assignments, (Ng, 2016), (Ohland, et al., 2012), (Montalvão & Baker, 2015); or even in the Final Year Projects, (Kim, 2014).

In Universiti Tenaga Nasional, as part of the efforts to equip the students with soft skills, the incorporation of group projects or group works into university courses were carried out, in the Bachelor of Mechanical Engineering (BME) program. Few modules from the 4 year Bachelor of Mechanical Engineering (Hons.) syllabi were shortlisted. Among the selected modules, MEMB322 – Mechanical Design Process (MDP) which will be now thoroughly discussed in this paper was one. The introduction of project work in MDP was aimed at preparing the students for their future profession that would require them to be able to function effectively as a team member, to be able to communicate effectively, and to demonstrate professionalism and ethics in handling complex engineering problems and activities.

## **Mechanical Design Process Group Project Implementation at UNITEN**

The module MEMB322 Mechanical Design Process was offered in semester 1 of academic year 2015/16. At the beginning of the semester, students were divided into groups of 5, 6, or 7 students per group. The lecturers and students were then discussed on the ideas of design and narrowed down the type of products to be designed.

Literature reviews on the relevant products were conducted by students. Based on the information gathered, students had to decide on one specific type of product that was to be designed. The market survey was then conducted to further look into the need of the product for the current market. At the same time, students were also required to concurrently conduct market surveys through meeting with the existing and potential competitors of their product. Such study helped in the benchmarking of their design.

In the Concept Generation stage, students were required to propose various designs of their products that were able to meet the customers' requirements and were also able to compete with current market. These concepts were then evaluated based on various aspects such as feasibility, cost effectiveness and sustainable use of materials. The best design which ticks all the essential design aspects and meets most of the customer requirements was then selected. Through regular

group meetings, students were expected to discuss and debate on the selected concept so that they were able to present and defend the concept during the competition day.

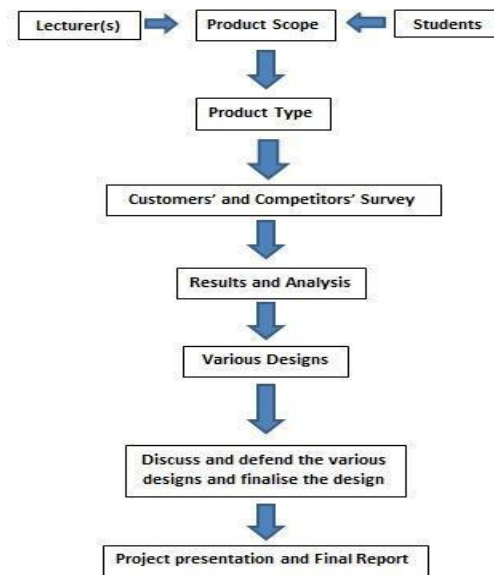
The end of the semester marked the project presentation and competition. This event involved academicians and members from the learned societies such as Institution of Engineers, Malaysia (IEM) and Institution of Mechanical Engineers (IMechE) who were invited as panel judges to choose the outstanding designs. The flow chart of different activities in the project is shown in Figure 1.

## Peer Review Assessment Implementation for MDP Project

The students' performance were assessed in five major areas in the peer review and assessment, which were

- Commitment
- Leadership
- Responsibility
- Personality
- Contribution

The rubric, which is developed by the faculty as general rubric for assessment, is shown in Table 1. From the rubric, it is clear that the students are assessed during the process of their project completion. Such process, as mentioned by (Kennedy, 2005), involves a wide range of behavioural elements, the management of group dynamics and its effectiveness.



**Figure 1:** MDP Project activities flow chart

**Table 1:** Rubrics for peer review and evaluation

Rubric Scale	1	2	3	4	5
Criteria	Poor		Acceptable		Excellent
<b>A. Commitment</b>	<b>Awareness to Participate</b> <i>Poor attendance of meetings (less than 50%), mostly late, comes to meetings unprepared and unaware of meeting objectives.</i>		<b>Active Participation</b> <i>70 % of meetings attended but occasionally late and unprepared but shows effort to be on time and ready to work.</i>		<b>Valuing Participation</b> <i>Always attend meetings, punctual, prepared and ready to work.</i>
<b>B. Leadership</b>	<b>Acknowledge Leadership</b> <i>Awareness is there but passive, waits for tasks to be assigned, just follow orders without providing suggestions, does not care about team direction, demoralises others.</i>		<b>Active Leadership</b> <i>Occasionally volunteers to do work and give suggestions, shows concern on team focus and attempts to encourage others.</i>		<b>Valuing Leadership</b> <i>Takes initiative with commitment, makes suggestions, provides focus, sparks creativity and energy.</i>
<b>C. Responsibility</b>	<b>Awareness of Responsibility</b> <i>Not committed in performing tasks assigned, always giving excuses for not being able to complete them, cannot be depended on, and in most occasion fail to accomplish tasks on time.</i>		<b>Perform Responsibility</b> <i>Perform responsibilities most of the time and on some occasion fail to complete tasks assigned. Meets deadlines most of the time.</i>		<b>Valuing Responsibility</b> <i>Take initiative with commitment. Gladly accepts work and gets it done, dependable and reliable, meets target deadlines.</i>
<b>D. Personality</b>	<b>Undesirable Personality</b> <i>Negative attitude, thinks everything is impossible and cannot be done, prefer to make decisions alone without seeking opinion of others, difficult and problematic to deal with.</i>		<b>Fairly Desirable Personality</b> <i>Attitude fairly positive but sometimes on the fence, tries to seek opinion of others and provide encouraging remarks, easy to deal with most of the time.</i>		<b>Desirable Personality</b> <i>Positive attitude, encourage others, always seeks consensus, easy to deal with.</i>
<b>E. Contribution</b>	<b>Awareness of Contribution</b> <i>Little contribution in providing ideas and leaves little impact on final product.</i>		<b>Active Contribution</b> <i>Tries to provide ideas and, leaves significant impact on final product.</i>		<b>Valuing Contribution</b> <i>Provides ideas in discussions, and provide very significant impact on final product.</i>

Every team members were required to evaluate each other according to the rubric scale provided. Based on this, an individual average score was calculated. Using all the individual average scores, a group average was then computed. This group average score represented the peer evaluation score each team member achieves in a particular group.

Table 2 illustrates a sample of peer evaluation individual score calculation based on the rubric for a student named James Bond who is a part of an imaginary team. On the other hand, Table 3 illustrates the calculation of overall average marks to be allocated to each team member with the contribution of individual average marks by all team members in team. The overall average marks are indicated in dark blue and italicised.

**Table 2:** Peer Evaluation by James Bond

Criteria	Member1: Paul Walker Name: _____ Student ID: _____	Member2: Sheila Majid Name: _____ Student ID: _____	Member3: Rosa Parks Name: _____ Student ID: _____	Member4: Mohammad Ali Name: _____ Student ID: _____	Member5: Jackie Chan Name: _____ Student ID: _____	Member6: Sharukh Khan Name: _____ Student ID: _____	Member7 Name: _____ Student ID: _____
Commitment	3	3	5	3	3	1	
Leadership	3	5	4	2	1	1	
Responsibility	4	4	4	2	2	2	
Personality	2	3	4	2	3	2	
Contribution	2	3	3	1	2	1	
Average	<b>2.8</b>	<b>3.6</b>	<b>4</b>	<b>2</b>	<b>2.2</b>	<b>1.4</b>	

**Table 3: Matrix of Peer Assessment**

Names	Paul Walker	Sheila Majid	Rosa Parks	Mohammad Ali	Jackie Chan	Sharukh Khan	James Bond
Paul Walker		2.8	3.4	2.8	3	3	2.6
Sheila Majid	3.2		3.5	2.5	2.1	1.4	2.5
Rosa Parks	1.2	3.4		2.3	1.8	1.6	3.2
Mohammad Ali	3.8	2.5	3.2		2.6	1.8	3.1
Jackie Chan	2.4	1.8	3.8	3.1		2.8	2.8
Sharukh Khan	3	2.2	3.6	3.3	2.9		2.8
James Bond	2.8	3.6	4	2	2.2	1.4	
Average	2.7333	2.7167	3.5833	2.6667	2.4333	2.0000	2.8333
Std Deviation	0.8824	0.6940	0.2858	0.4926	0.4761	0.7155	0.2733

A total of 169 students registered for the MDP and took part in the project. Looking at the large number, students are divided into three sections (Section 1 - Section 3) to ease the administration process. Section 1 consisted of 60 students, 61 students were registered into Section 2, and the last section consisted of 48 students. The students were given a time frame of 1 week to rate their peers contribution. After that the peer review and assessment will be closed. A total of 58 students from Section 1, 60 from Section 2 and 46 from Section 3 took part in the peer review. There were 5 students who failed to comply with the time frame criteria given and their results were not included. Nonetheless, this did not affect the final results as they were not from the same group in the same section.

### Analysis of Peer Review Assessment

The average shown in the columns of Table 2 are typically taken as the measure of the contribution of each member. It is understood that when all group members are trying to estimate the same quantity, the standard deviation will be about the same for each column, (Kennedy, 2005).

The results of all teams and sections re-tabulated and illustrated from Table 4 to Table 7.

From Table 4, it can be seen that for Group 1, Group 2, Group 7, Group 8 and Group 9 in Section 1, the maximum standard deviations differences in the group are more than 10%. The same pattern can also be seen in Group 2, Group 5, Group 6, and Group 9 of Section 2 from Table 5, Group 5, Group 7 and Group 8 of Section 3 from Table 6. The maximum standard deviation differences indicated that certain members in the group had significant different level of contribution to the project. These differences could had been measured and assessed differently from the perspective of different members' point of view due to the fact that each student judgement was widely inconsistent.

**Table 4:** Column Standard Deviation of Peer Review of Section 1. The maximum standard deviation is bolded while the minimum standard deviation is italicised.

Student	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10
1	<i>0.3033</i>	0.4163	<b>0.8165</b>	0.7155	0.7090	0.6429	0.4000	0.3286	0.4967	<b>0.7348</b>
2	<b>0.9295</b>	<i>0.2309</i>	0.7127	<b>0.8497</b>	0.5933	0.7394	<b>1.6289</b>	0.4382	0.3882	0.5983
3	0.3724	<b>1.0832</b>	<i>0.4561</i>	<i>0.4604</i>	<b>0.8262</b>	<i>0.4123</i>	0.4000	<i>0.2449</i>	0.2757	0.5762
4	0.5477	0.3202	0.4899	0.7274	0.5762	0.3786	<i>0.2309</i>	1.1622	<i>0.1966</i>	0.6618
5	<i>0.5933</i>	0.3266	0.5020		<i>0.4967</i>	0.3416	0.9866	0.2608	<b>0.8000</b>	0.3633
6	0.3578				0.6519	<b>0.7746</b>		<b>1.2759</b>	0.3033	<i>0.2449</i>
7	0.4099									0.4775

**Table 5:** Column Standard Deviation of Peer Review of Section 2. The maximum standard deviation is bolded while the minimum standard deviation is italicised.

Student	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10
1	0.4416	<i>0.2191</i>	<b>0.2858</b>	<b>0.6532</b>	0.5382	0.6363	0.3933	<i>0.3286</i>	0.5292	0.4502
2	0.4550	0.2280	0.2066	0.2422	<b>0.9004</b>	<i>0.5299</i>	<i>0.3724</i>	0.4899	<b>0.7572</b>	<i>0.3724</i>
3	0.4550	0.8258	<i>0.1897</i>	0.5316	0.6274	0.5601	0.5367	0.4992	0.4169	0.4561
4	0.4550	0.3286	0.2563	0.1673	<i>0.3971</i>	0.6069	<b>0.6197</b>	<b>0.6943</b>	<i>0.0000</i>	0.4131
5	<b>0.5788</b>	<b>0.9940</b>	0.2665	<i>0.1633</i>	0.4997	<b>1.4384</b>	0.5762	0.5586	0.2828	<b>0.4803</b>
6	<i>0.3782</i>	0.8075	0.2658	0.5657	0.5382	0.7032	0.4502		0.3055	0.4750
7					0.4722					

**Table 6:** Column Standard Deviation of Peer Review of Section 3. The maximum standard deviation is bolded while the minimum standard deviation is italicised.

Student	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
1	0.4382	0.3578	0.3882	<i>0.0000</i>	<b>1.1639</b>	0.5762	<i>0.4320</i>	0.5888
2	0.5762	0.2966	0.4131	<b>0.5000</b>	<i>0.3502</i>	<b>0.8000</b>	0.7550	<b>0.7746</b>
3	0.5404	0.3899	0.2658	0.4472	0.8075	0.6782	<b>1.1818</b>	0.3000
4	<i>0.4099</i>	0.2828	0.3882	0.4472	<i>0.3795</i>	<i>0.5079</i>	0.7024	0.4761
5	<b>0.8000</b>	<b>0.7211</b>	<b>0.4147</b>	0.4472	0.8548	0.7430	0.7394	<i>0.1155</i>
6	0.4336	<b>0.7211</b>	0.3933	0.4472	0.8672		0.9092	
7								

Averaging the values of the standard deviations for three sections as shown in Tables 4 – 6, Table 7 illustrates the average score for peer assessment of each section and their standard deviation. From the results, it can be seen that Section 2 and Section 3 students have lower value of standard deviation as compared to students from Section 1. This indicates that the students from these two sections had actually contributed more equally in the project as compared to students from Section 1.

**Table 7:** Average Score of Peer Assessment and Standard Deviation of Each Section

Section	Section 1	Section 2	Section 3
Average	4.0436	4.1671	4.1186
Standard Deviation	0.5407	0.3709	0.4551

Table 8 shows the distribution of column standard deviation of the students for all 169 students. It can be seen from the tabulation of distribution that the majority of the students have standard deviation of around 10 – 20%. These results suggest that the students have significant differences in their ability as assessor, or they completely have no clue of what they are supposed to be assessing. It could also suggest that the students are not prepared to assess their peers. Nevertheless, these results do not surprise the researchers, as the variation among the peer assessors is consistent with low inter-rater reliability, as suggested by (Roth & Mavin, 2015).

**Table 8:** Column Standard Deviation Distribution of Each Section

Range \ Section	Section 1	Section 2	Section 3
0- 0.19999	1	4	2
0.2-0.3999	17	17	12
0.4-0.5999	20	27	17
0.6-0.7999	10	8	8
0.8-0.9999	8	4	6
1.0-1.1999	3	0	3
1.20 +	1	1	0

Results obtained indicated that there are various shortcomings in the Peer Review and Assessment implemented. With this, various steps for improvements from both lecturers and students are required.

## Problems with Peer Review Assessment in MDP Project

From the assessment conducted, it is noticed that the students actually reacted to the assessment in many ways. For instance, 5 students were unable to assess their peers as they did not submit their peer evaluation during the period provided. There were also students who tend to give a relative low marks to those who contributed lesser or did not contribute a fair share of the load assigned.

There were also cases where one or two members of the group that would mark objectively according to the criteria, while other members of the group preferred to award high marks to their friends as a goodwill even though they had not contributed a fair share of the tasks.

In one occasion, the implementation of peer review and assessment resulted in significant conflict between group members. There was a case where a group member threatened to take action against the group leader as well as other team members who refused to award good marks for his poor contribution to the project.

The collection, collation and analysis of data were time consuming. This actually increased the burden and work load of the academicians who were already overloaded with teaching and learning activities, management work, and research commitment. If the peer assessment did little to improve discrimination between students' grades, then all the extra efforts are for nothing in the end.

## **Conclusion and Future Improvement**

The peer assessment received different reactions and feedback from students. The results and analysis of the peer review presented in this paper raised few issues and concerns relating to this assessment as a mechanism to assess students' performance, among which the ability of the students to rate their peers.

To improve the validity of the peer assessment, the academicians are advised to put in extra considerable amount of time and effort to explain the importance/significance of peer evaluation to the students during lecture contact hours.

Apart from this, the lecturers are advised to allocate time to meet the students individually and discuss in details with them when filling the assessment form. This will help to ensure that the students take the peer assessment seriously to ensure the validity and reliability of the assessment. This will also help to ensure the students are able to provide appropriate data when applying the peer assessment rubric.

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# **The Effectiveness of the Implementation of Paralympic Athletic Training Module for Disabled Athletes**

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## **Abstract**

Paralympic Athletic Training Module is a printed manual of procedures or systematic step by step training programme. The module was developed by a group of experienced coaches, senior disabled athletes and researchers who are experts in sport field. The reason for the development of this module was due to the lack of material in Paralympic sports training. A study was carried out to evaluate this new module in terms of content quality and effectiveness. The study was involved four primary respondents and sixteen secondary respondents from four districts in Selangor, Malaysia. The primary respondents were experienced coaches that were purposively selected. Meanwhile, the secondary respondents were disabled athletes chosen randomly by the primary respondents. The primary respondents used the module in their training programme. This study employed a qualitative approach where the primary respondents were interviewed. Interviews were recorded, transcribed verbatim transcript and coded for analysis purpose. The findings showed that the module was effective in enhancing running speed, athletes' performance and self-intrinsic. In conclusion, the Paralympic Athletic Training Module helps to improve disabled athletes' performances in the psychomotor and affective domain.

**Keywords:** Paralympic, Paralympic Athletic Training Module, Disabled Athletes, Training and Qualitative

## **Introduction**

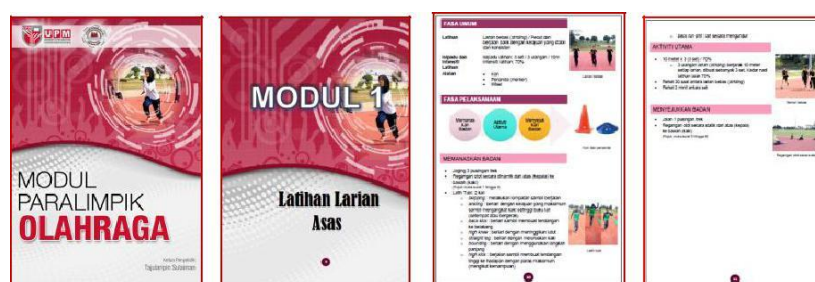
Sports refer to activities carried out at leisure (Md Amin, Jaffry, & Mazuki, 2009). Initially, sports were only to fill in leisure time with some fun and useful activities. Later, sports was adapted and upgraded to a solid game or match involving rules and competition where the results were recognized up to the international level such as the Paralympic Games where disabled athletes participate.

People with disabilities constitute a significant part of the world's population. Statistics in 2010 shows approximately 15 percent of the world's population reported a disability (World Health Organization [WHO], 2011). A disabled person is defined as an individual who is in a situation that is considered to reduce the function when compared with normal individuals (Suriya, 2015). Lack of physical or mental problem will limit the movement to do three or more events in a day (Riner & Sellhorst, 2013). This situation make appears a common perspective that comprehensive sport training only suit to usual capabilities athletes instead of disabled athletes.

Development of Paralympic Athletic Training Module provides a material of guideline to perform systematic sports training. This material important to support the lack of references in achieve a quality training resulting to disabled athletes could not show the actual performance even been given the opportunity to participate in sports (DePauw & Gavron, 2005). Implementation of the training program wills exposure athletes about their physical abilities (Grenier & Kearns, 2012). Sports training program is one way to explore issues related to disability (Michelle & Catherine, 2012). In other hand, the module training program will provide learning experiences and knowledge to the athletes to be competitive and trained (Berry, 2004).

Development of Paralympic Athletic Training Module begins with a series of workshops to develop the module content. The content focuses on a few things like effective and timely physical exercise, techniques, skills, ability and cardiovascular endurance without neglecting the needs of the disabled. To complete the content, photography and video sessions were conducted with disabled athletes. Then, content validity was done by reviewed the process in order to meet the objectives of the training programs for it to be easily understood and effective.

Paralympic Athletic Training Module contain 15 sub-modules; (1) basic running training; (2) standing start; (3) falling start; (4) touching line start; (5) lying down start; (6) simple standing start; (7) starting block; (8) crouching start; (9) using starting block; (10) set position; (11) take-off drill; (12) sprint 300m x 4; (13) weight training; (14) long distance running; and (15) sprint 60m x 3, 80m x 3 and 120m x2. Each sub-module has three phases, namely warm-up phase, main activity phase and cool-down phase. For warm-up phase, the athlete must perform physical activities such as jogging and muscles dynamic stretching. The main activity phase aims to develop the skills and techniques of sprinting, knowledge about the body position and how to use the starting blocks as well as techniques improve cardiovascular endurance. Activities for cool-down phase are free running, running on the track and muscle strain statically. Figure 1 shows the Paralympic Athletic Training Module in the manuals form.



**Figure 1:** Sub-module 1 in Paralympic Athletic Training Module

The study aim to explore the suitability of Athletic Training Module that was implementing toward disabled athletes. The main purpose of study is to investigate is it any effects or changes occurs on the running speed of performance of disabled athletes based on coaches' perspectives after undergoing training program.

## Methodology

This study employed qualitative approach with using interview method. Four primary respondents (Respondent A, B, C and D) were selected by purposive sampling based on four

criteria. The first criteria, respondents were school teachers were duty in Special Education and teach special students. Second, the respondents totally agreed to engage in the study. Third, respondents has qualification in athletics, at least certificate in the sports coaching course level one and last criteria is respondents has experience as a coach for more than three years. By considering a few factors such as time length of research takes, the difficulty of research setting, and the difficulty in transcribing the interviews, thus, numbers of four primary respondents were considered adequate to provide a plentiful data. Furthermore, qualitative approach is not only about number of respondents but more emphasize on research objective, time and cost factor (Othman 2009; Sabita 2005). According to Crouch and McKenzie (2006), a small number of cases will facilitate the researcher's close association with the respondents which enable to enhance the validity of fine-grained and in-depth inquiry in naturalistic settings. Each primary respondent chose four secondary respondents. Primary respondents execute training program towards their secondary respondents absolutely based on Paralympic Athletic Training Module. The five days training program cover all training phases, type, volume and training intensity. After done with implementation of training program on secondary respondents, collecting data through interview was conducted on the primary respondents. Qualitative analysis was employed as an evaluation of the effectiveness of the Paralympic Athletic Training Module.

## Statement of the Problem

The finding was to look forwards coaches' viewpoint regarding to the suitability of Athletic Training Module for disabled people. Respondent A argues this module training program is suitable to be implemented to new athletes as a basic training.

"This module is an introduction of training for new sprinter, and it is suitable for them." (Respondent A)

While the respondent B said: "A simple module for disabled sprinter but it is very useful for new athletes." (Respondent B)

Respondent C and D also agreed the module suitable for the disabled, even too basic and it still require improvement.

The findings resulted in three components with seven themes. The first component is the running speed with two themes as described in Table 1.

**Table 1:** Component of Running Speed

Respondent		A	B	C	D
Theme	Strength of Legs	√	√		√
	Running Techniques	√	√	√	√

Based on Table 1, respondent A, B and D found positive change in leg strength of athletes before and after the training program. Only respondent C thought the training program does not affect the strength of athlete's foot. For example, respondent A said:

"Strength of athletes' legs increased and their whole body become fitter." (Respondent A)

Respondent B also noticed:

"Through this module, we can see the strength of athletes improved, especially the legs." (Respondent B)

Respondent D explains: "It affects in increase of athlete's fitness and same happen to body strength, especially the legs." (Respondent D)

The results showed that all primary respondents agreed the training program has been helping athletes to perform training with proper technique.

"Speed of disabled athletes can be improved. Their running techniques also will improve especially consistently high knee during running ". (Respondent B)

Respondent C also agreed: "... Most of them can do the exercises with proper technique ...". (Respondent C)

The second component is athletes' performance. There are two themes in athletes' performance which are stamina and physical fitness as shown in Table 2. For example, respondent A found an increase in physical fitness of disabled athletes. For respondent C, he agreed the athletes have better stamina and physical fitness than before.

**Table 2:** Component of Athletes' Performance

Respondent		A	B	C	D
Theme	Stamina			√	√
	Physical Fitness	√		√	

"Many aspects increase after training such as running speed, strength, 'pick up' force and stamina or endurance... athlete's physical strength also improves." (Respondent C)

Respondent D observe the implementation of a training program based on Paralympic Athletic Training Module is only effective in increase stamina of disabled athletes.

"There is increasing in terms of running speed, they can run with high knees, stamina ...". (Respondent D)

However, respondent B state there is no change in the athletes' performance after training program. The third component is self-intrinsic which consists of three themes self-confidence, fighting spirit and focus as shown in Table 3.

**Table 3:** Component of Self-intrinsic

Respondent		A	B	C	D
Theme	Self-confident	√	√	√	√
	Fighting Spirit			√	
	Focus				√

Based on Table 3, all primary respondents agree the disabled athletes increased their confidence after undergoing the training program. According to respondent C, his trained athletes showed rising spirit during the running.

"Confidence of disabled athletes increased because most of them can do the exercises with proper technique and also their fighting spirit increase on order to compete among them during training". (Respondent C)

According to respondent D, besides increase in self-confidence, the training program also had a positive impact on focus while performing the exercise.

"Self-confidence increase as the athletes able to do exercise with proper technique and their focus better after the training". (Respondent D)

## **Discussions**

Sports are divided into two categories, recreational sports for the purpose of filling the leisure time and high performance sport for the match. According to Zorba, Assoc, and Yanan (2012), sports is "institutionalized competitive event involving physical exertion and complex skill, in which involvement of one person was driven by internal and external satisfaction". This study was significance in higher education to enhance the quality of training program focusing in special education. Disabled athletes need more attention to ensure they able to pursue their goals just like the normal athletes. The study was aim to look forward the effective guideline of training process in physical lesson for special individuals. Therefore, a standard training module should be considered to develop but still stress on adaptability of disabled athletes' peculiar characteristics.

The findings showed the implementation of a training program based on Paralympic Athletic Training Module provide positive effects related to external and internal aspects. Primary respondents acknowledged an improvement of external aspect like strength of legs, running technique, stamina and physical fitness and also positive changes in the internal aspect like confidence, spirit and focus. According to Liow and Hopkins (1996), "sports performance can be improved through modification of physical training, nutrition, psychology, strategy and equipment". However, performance for most sports can be improved significantly through modification of physical exercise compared to other modifications. Anderson (2008) also argues there are some benefits from engagement in physical activity such as "improve intelligence, health, prolong life, strengthens the mental, the spiritual well-being, increased self-confidence, socialization and reduce stress".

Physical fitness refers to the ability to perform moderate levels of physical activity without undue fatigue (American College of Sports Medicine Position Stand, 1998). Research by Rimmer, Heller, Wang, and Valerio (2004) shows the "poor cardiovascular fitness puts people with Down syndrome at a greater risk of health problems such as diabetes, cardiovascular diseases, osteoporosis, and obesity". Consequently, it also affects their ability to work, perform activities of daily living, or participate in sporting and recreational activities. For these reasons, there has been an increased interest in developing and implementing programs that improve the cardiovascular fitness and ultimately the health and physical activity of people with Down syndrome (US Department of Health and Human Services). Cardiovascular exercise programs also appear to be effective in increasing exercise endurance, work capacity, and distance walked in 6 minutes in people with heart failure (Rees, Taylor, Singh, Coats, & Ebrahim, 2004). This research was consequent from research Rimmer, Heller, Wang, and Valerio (2004) in order to explore the important of specific training program toward disabled athletes in Malaysia.

For internal aspect, the athletes appear to be more confident, focused and have begun to show their fighting spirit to compete other competitors. Increased self-awareness will promote better sport performance (Martin, 1999). In addition, Jackson, Thoma, Marsh, and Smethurst (2001) explained the “mental training is one of the activities that need to be absorbed into the psychology of the sports training program to stimulate physical movement”. Motivational strategies were fundamental to all of the training programs. For example, Millar, Fernhall, and Burkett (1993) found that “constant positive reinforcement was necessary, otherwise participants stopped exercising immediately or less interest”. This strategy was particularly important in the early stages when participants were adapting to a training program. Mental training is as emotional control, goal setting, mental imagery, visualization, concentration and breathing exercises. Research by Sia Seng Lee (2014) found the “successful athletes have low self-doubts” that have contributed to the low level of anxiety and high self-confidence (Omar Fauzee, 2003). Good concentration during practice also helps athletes to perform physical activity effectively and be able to commit with psychological elements that support the effectiveness of learning and physical performance (Tashman & Tenenbaum, 2013).

## Conclusions

This paper was an evaluation to effectiveness of new developed Paralympic Athletic Training Module. A training program totally based on module was implemented toward 16 disabled athletes which conducted by four experienced coaches. According to coaches, there are a lot of improvements occur to their athletes after follow the exercise. Coaches agreed the training program based on Paralympic Athletic Training Module assist disabled athletes in strengthen running speed, performance and self-intrinsic.

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# **Entrepreneurial Capital: A Comparative Study on Entrepreneurial Attitudes and Intentions between Indonesian and Filipino Business Students**

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## **Abstract**

This research was undertaken to determine the factors influencing the entrepreneurial capital among students in selected schools in Indonesia and Philippines. Focus of the study is to compare the determinant factors of entrepreneurial attitudes and intentions. Specifically, the study investigates the respondents' view on the following entrepreneurial capital in terms of importance to entrepreneurial success. It further examines the respondents' self - assessment on their possession of the entrepreneurial qualities, their views on entrepreneurs. Additionally, the respondents' perceived on importance of benefits and values for starting a business and the role of influencers in the respondents' views and perceptions on entrepreneurship were also analyzed. Finally, the study investigates the differences in the attitudes among respondent groups; and the relationships between respondents' characteristics, their attitude towards entrepreneurship and their intention to start a business. Through the comparative study, the study would contribute to both Indonesia and Philippines' school of business on understanding the attitudes of their students towards entrepreneurship and investigating both the role of entrepreneurial education and social norms as collateral or concomitant factors in shaping attitudes that lead to entrepreneurial intentions. Interested findings show that having a good attitude, the respondents in both institutions gave the impression that they would be likely to engage themselves in doing business in the future. There is also a significant difference between DLSL and WU's response concerning their attitudes towards entrepreneurs and entrepreneurship as well as the respondents attitude on the extent to which prerequisites act as barriers.

**Keywords:** Entrepreneurial Capital, Entrepreneurial Intentions, Entrepreneurial Attitudes, Business Students, Entrepreneurship

## **Introduction**

The Philippines and Indonesia have similar characteristics as entrepreneurial countries.(Setiadi, N. 2012). Small and medium-sized enterprises (SME), including micro-enterprises, constitute 99 percent of all business establishments and 60 percent of the exporting firms in the Philippines. Based from the record of the Department of Trade and Industry in the Philippines, SME's currently employ about 55 percent of the Philippine labor force and contributes 30 percent to total domestic sales volume (LET'S GO Foundation, 2008). In all forms of enterprises in Indonesia, it is estimated that they employ an approximately 85.4 millions of people which contribute to 53.3% in its GDP. Despite these data, statistics show that poverty incidence increased in both countries although they have already installed mechanisms geared towards poverty alleviation in the form of livelihood trainings and financing. Furthermore, even private individuals and institutions have also battled to promote entrepreneurship with similar initiatives as that of the government. Obviously the government really wanted to empower the small enterprises in both places given the deliberate policies on

small enterprises were intended to enhance the productivity of small enterprises and improve the effective implementation of small enterprise empowerment programs and activities. Despite such efforts, impact seemed so trivially evident, if there is any. Most cases involved non-pursuit of or indifference to entrepreneurial undertakings or if individuals do pursue, oftentimes, the entrepreneurial undertakings could not be sustained. Entrepreneurship has been considered by a lot of developing and underdeveloped countries as one possible solutions to address poverty issues. Many governments have not been remiss in initiating programs and campaigns to promote entrepreneurial activities, especially among the young to encourage them to be active contributors to the thrust of poverty alleviation. Despite these efforts, mindsets of students still appear to be focused on corporate employment. Guided by Aizen's 2006 Theory of Planned Behavior (TPB) which states that human behavior is guided by three kinds of considerations such as behavioral beliefs, normative beliefs, and control beliefs, this paper would like to discover the entrepreneurial attitudes and intentions between business students of the De La Salle Lipa and Widjatama University in particular. Since both institutions offer business programs, this study inquires into possible factors influencing entrepreneurial attitudes and ultimately their intention to pursue an entrepreneurial career.

The operational framework below was based from Resurrecion's study which covered eight components about entrepreneurship. Correlations between each component and the respondents' intention to start a business was performed as well as the comparative analysis to test whether there is a significant difference between the two universities.

## Operational Framework

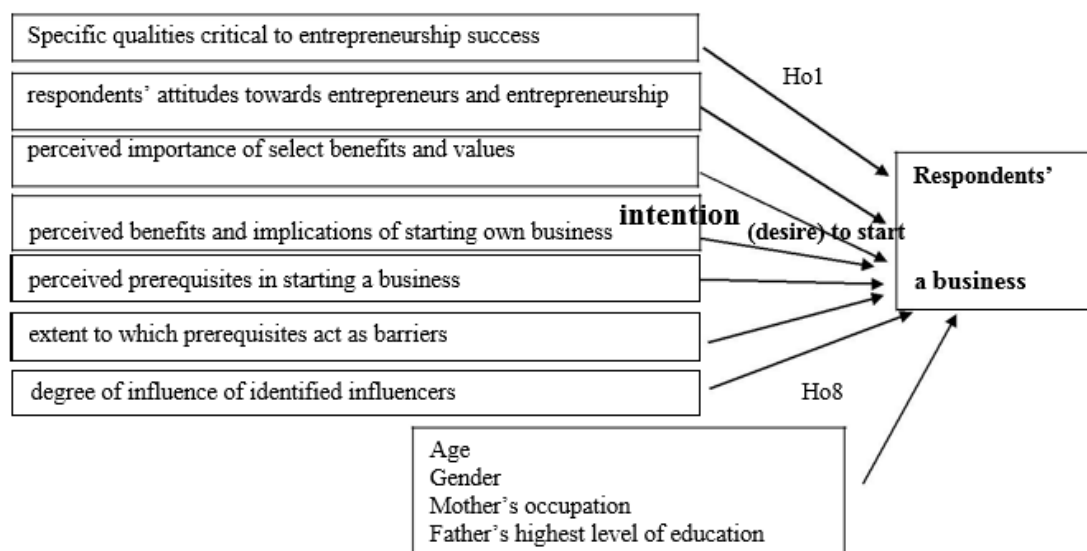


Figure 1. Operational Framework for DLSU and WU

## II. Methods

### Research Design

This study made use of the descriptive design approach in presenting the data from De La Salle Lipa and Widjatama University. A comparative analysis was also done in order to determine whether there is a significant difference on the entrepreneurial attitude and intention between the two institutions/universities

### Subject of the Study

The respondents of the study were 186 and 118 business students from De La Salle (Philippines) and Widjatama University (Indonesia) respectively. Those respondents are potential entrepreneurs in the future.

### Instrumentation

With the aim of collaborating with one another, the two institutions involved obtained the data needed adapting the instrument of the Resurreccion's 2010 study which involved the three additional entrepreneurial qualities from the Personal Entrepreneurial Competencies. (Resurreccion et al 1998).

### Statistical treatment

Basic statistical tools such as frequencies and proportions, mean and median were used in the study to measure central tendencies, and standard deviations and coefficients of variation to measure variability. Collected data were analyzed for their content, presented in the form of a graph and were given a simple statistical treatment. In order to present a deeper analysis, correlations using Pearson's R was also used. This is to test whether there is a significant relationship among the given variables to the desire/intent of the students to start a business in the future. Lastly, Levene's test was also used to find out whether there is a significant difference between the intention of the two universities.

## II. Results and Discussion

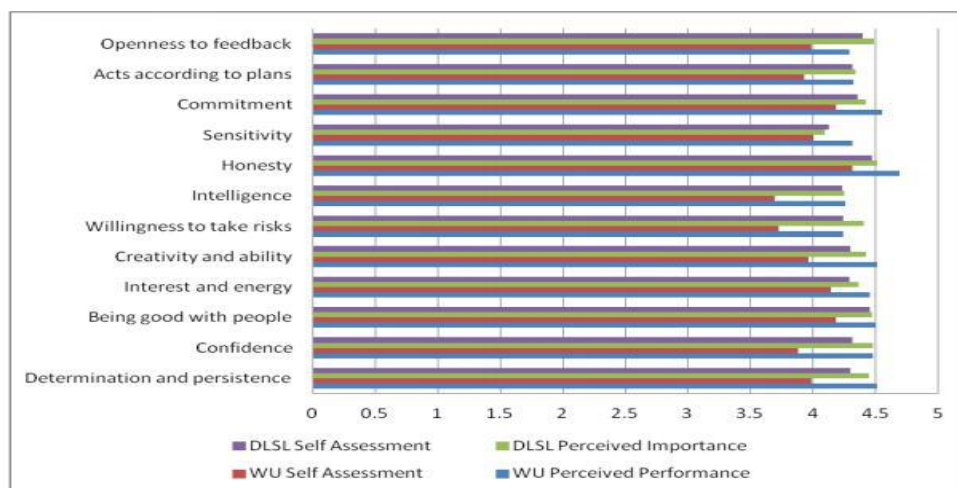
### Demographic Profile of the Respondents

In the case of DLSL, majority of the respondents were aged 19-20 which comprised 58.38% followed by 17-18, 37.30% and only 8 or 4.32% covered the age group of 21-22. On the other hand, majority of the WU respondents came from age group of 21-22 which comprised of 61%, followed by 23-24 yrs. of age (16.10%), 19-20 yrs. old (12.7%), 18 yrs. old (7%) and 25-26 yrs. old (2.54%). In terms of gender, majority of the business students who participated in the study were female consisting of 71% with only 29% male for DLSL while for WU, it was well participated by male consisting of 59.32%, while female participation was only 40.6%. For mother's occupation of the students, 37.6% of DLSL mothers were no job, followed by those who are business owners (22.6%), others or OFW as indicated (22.6%), employed in White Collar jobs (11.3%) and in Blue Collar jobs (5.9%). For WU, the vast majority of students' mothers' occupations is unemployed which is 43%, employed as Blue Collar workers which is 30%, with the remaining 19% as those running a business and for others category, 8%. (Setiadi et al, 2012). Results further revealed that when asked about their father's highest educational attainment, 48.4% of DLSL students' father finished certificate course, followed by 21.5% with BS Degree holder, 17.7% HS graduate. Around 9.7% finished grade school, 2.2% and .5% finished Masteral Degree and PHD respectively. For WU, 43.2% of WU's father finished grade school, followed 30.5% of those who finished Certificate course, 18.6% with Masters and 7.6% with PHD.

Profile of the Respondents in terms of their desire to start a business in the future In terms of their desire to start a business in the future For DLSL, 72% of the respondents' have the desire to start a business in the future, 28% are undecided and 0% have no intention. For WU, it also shows that almost all (87.3%) have the desire while only 12.7% are still undecided. It means that majority of the business students from both institutions have the desire to start their own business someday.

## Perceived Importance and Self - Assessment on specific qualities critical to Entrepreneurship Success

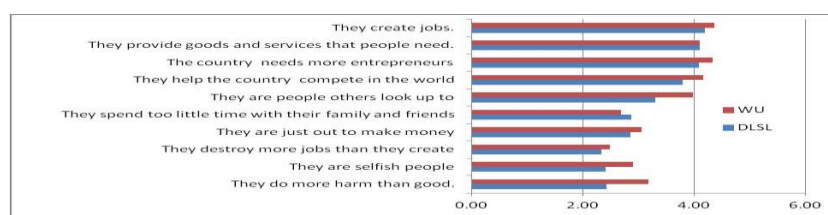
Below is the graphical presentation of the perceived importance and self assessment of students when asked about specific qualities that are critical to entrepreneurship success. It is noticeable that for DLSL, it shows a minimal gap between the two except for determination, perseverance and confidence, creativity and ability and willingness to take risks where the students assessed themselves as having a low rating compared with their perceived importance of those qualities. Being good with people and honesty are the qualities which have a very closed rating in terms of perceived importance (very important) and in terms of how students assessed themselves (very high). For WU, there's quite a big gap on almost all the qualities they believe are critical to entrepreneurship success. As seen from the graph, the students' self assessment on the same qualities identified as essential to entrepreneurial success is less than the perceived importance. This may indicate the self-efficacy levels which are inherent to young people who tend to feel they have yet to learn to become successful. (Setiadi, N. et al 2012).



**Figure 2:** Perceived Importance and Self Assessment on specific qualities critical to entrepreneurship success (Section 1)

## Respondents' attitudes towards entrepreneurs and entrepreneurship (Section 2)

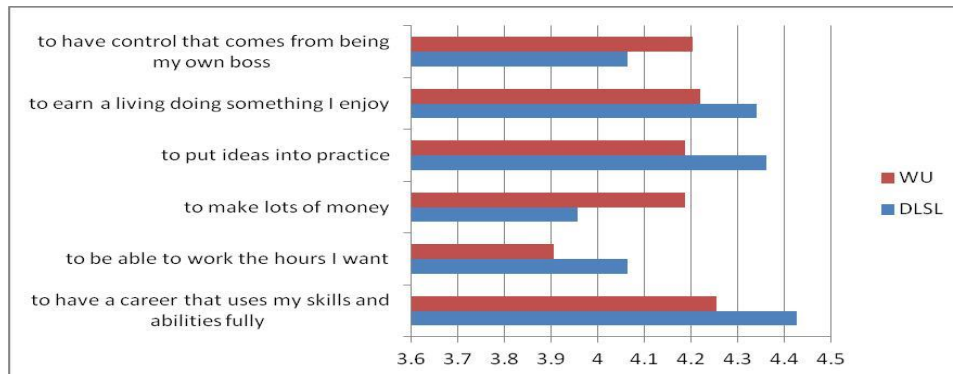
From among the attitudes towards entrepreneurs and entrepreneurship, respondents from both institutions strongly agree that entrepreneurs and entrepreneurship create jobs as seen on the graph. DLSL respondents disagree on items which state that they do more than harm than good compare with WU which they agree; but for the component that they are selfish people and they destroy more jobs than they create, both institutions' respondents disagree with a mean point of 2.3 and 2.4 respectively.



**Figure 3:** Respondents' attitudes towards entrepreneurs and entrepreneurship (Section 2)

### Perceived Importance of select benefits and values (Section 3)

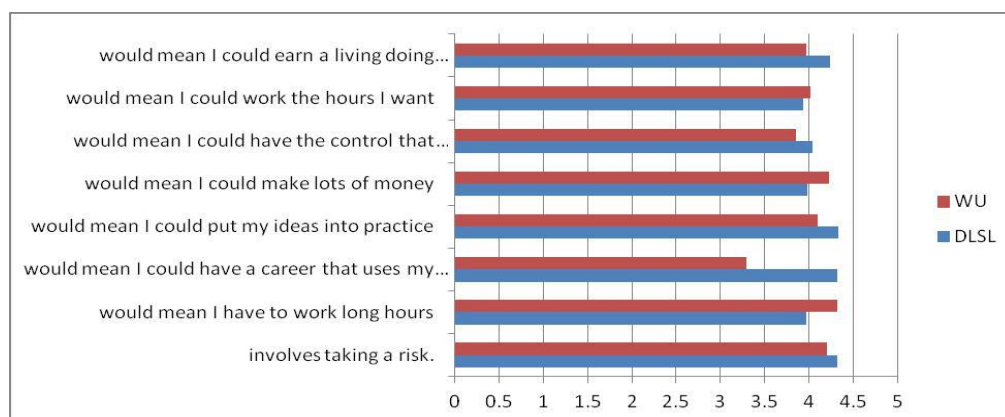
The graph below shows how important the select benefit and values to the respondents of both institutions. For DLSL students, they gave a high rating of 4.42 on the importance of having a career that will use their skills and abilities fully which they strongly agree while WU students only gave it a rating of 4.25 which means they only agree. Further, on the statement that to be able to work the hours I want, WU gave a 3.90 which is a low rating compared with DLSL with a rating of 4.06 which also means that respondents from both universities differ on their level of agreement. To put ideas into practice and to earn a living something I enjoy are also very important for DLSL students as they put a high rating on both compared with WU. It is also noticeable that for DLSL, they did not put as much importance on the idea of making lots of money with a low rating of 3.95 as compared with WU with a high rating of 4.18.



**Figure 4:** Perceived Importance of select benefits and values (Section 3)

### Perceived benefits and implications of starting own business (Section 4)

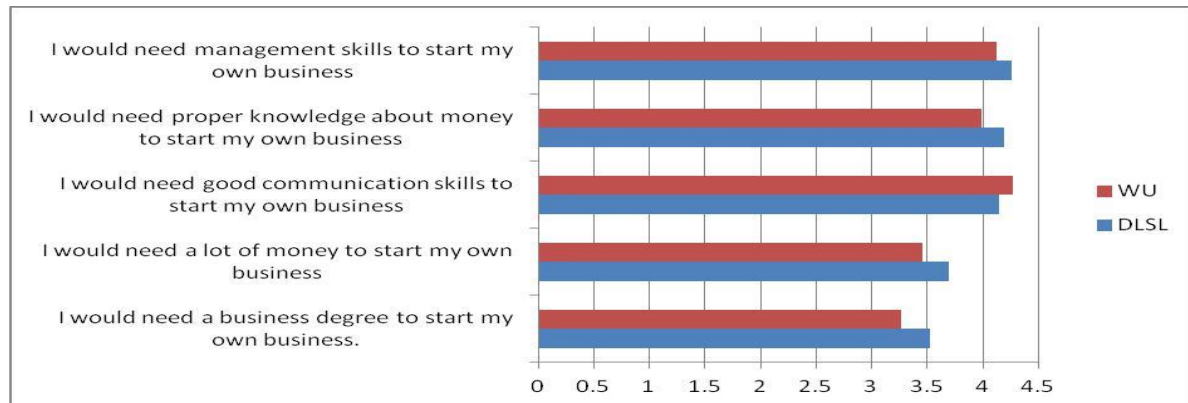
This part shows how the students from both universities perceive the benefits and the implications of starting their own business. Except for it involves taking a risk and it could put their ideas into practice which they both agree, the rest of the statements present how the two differs in their perception. On the statement that starting a business, it would mean long work hours, DLSL rated it as 3.96 while 4.32 for WU. On the other hand, for the statement that it would mean a career that would use their skills and abilities fully, DLSL rated it as 4.32 higher than WU's rating which is 3.29 only. Although, it also means that they both agree, you would notice their difference. Another remarkable difference is that for DLSL a much lower rating of 3.98 compared with WU's 4.2 on the idea that it would mean making lots of money.



**Figure 5:** Perceived benefits and implications of starting own business (Section 4)

### Perceived prerequisites in starting a business (Section 5)

The graph below shows that the students strongly agree that prerequisites in starting a business one should need management skills, proper knowledge about money and good communication skills as priority compared with the needs of having a lot of money and finishing a business degree course to start a business which they only agree that they are needed in doing so.



**Figure 6:** Perceived prerequisites in starting a business (Section 5)

#### Extent to which prerequisites act as barriers (Section 6)

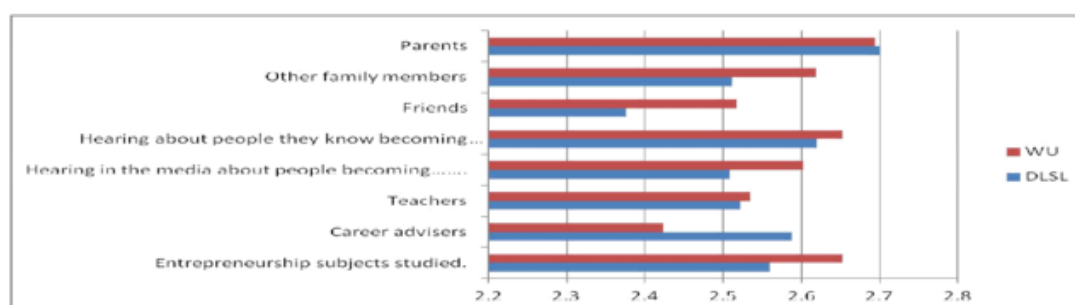
Graph below shows the extent to which the respondents perceived prerequisites as barriers or doubts in terms of their ability. It shows that they DLSL students are reluctant to work long hours and to take risks when they start their own business compared with WU students.



**Figure 7:** Extent to which prerequisites act as barriers (Section 6)

#### Degree of influence of identified influencers (Section 7)

Figure 7 shows that almost the identified influencers given proved to be very influential to business students especially their parents having the highest mean of 2.7 for DSL and 2.6 for WU. Lowest mean for DLSL was given to Friends (2.37) and for WU it was the career adviser (2.42).



**Figure 8:** Degree of influence of identified influencers (Section 7)

The following tables show the relationship between the profile of the respondents which include age, gender, mother's occupation and father's highest educational attainment with their intention to start a business in the future. Table 1 shows DLSL respondents profile and their relationship with their intention to start a business in the future. With a p-value of .812 which is  $>.05$ , it means that the relationship is not significant.

**Table 1:** Relationship between profile of DLSL respondents and their intent to start a business in the future

		Sum of					VERBAL
Model		Squares	df	Mean Square	F	p-value	INTERPRETATION
1	Regression	.352	4	.088	.396	.812 <sup>a</sup>	NOT SIGNIFICANT
	Residual	38.457	173	.222			
	Total	38.809	177				

On the other hand, WU respondents' profile and their intention to start a business in the future also reveal a not significant relationship having a p-value  $>.05$ .

**Table 2:** Relationship between profile of WU respondents and their intent to start a business in the future

						VERBAL INTERPRETATION	
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	4.443	4	1.111	.705	.590 <sup>a</sup>	NOT SIGNIFICANT
	Residual	178.032	113	1.576			

Table 3 presents the relationship between each variable/component which covers Section 2 to Section 7 and the behavioral Intent of the respondents to start a business in the future. It shows that only Section 2 which refers to respondents' attitudes towards entrepreneurs

reveal a significant relationship in the case of DLSL. For WU, all sections post a not significant relationship.

**Table 3:** Relationship between each section 2 and the behavioral Intent of the respondents to start a business in the future.

	t-value	p-value	Verbal Interpretation
respondents' attitude towards entrepreneurs and entrepreneurship			
For DLSL	-2.210	.028	Significant
For WU	.241	.894	Not Significant
perceived importance of select benefits and values			
For DLSL	-2.064	.040	Significant
For WU	1.948	.054	Not Significant
perceived benefits and implications of starting own business			
For DLSL	.580	.563	Not Significant
For WU	-.979	.330	Not Significant
perceived prerequisites in starting a business			
For DLSL	-.978	.329	Not Significant
For WU	.030	.976	Not Significant
Extent to which prerequisites act as barriers			
For DLSL	.705	.482	Not Significant
For WU	1.464	.146	Not Significant
degree of influence of identified influencers			
For DLSL	-.587	.558	Not Significant
For WU	-1.178	.241	Not Significant

Table 4 shows that there is no significant difference in the perceived importance, section 3, section4, section 5 and section 7 of the respondents between DLSL and WU given a p value of  $>.05$ . Significant difference exist on self assessment and section2 with a resulting p value of  $<.05$ . Further, there is a significant difference in DLSL and WU students' intention to start a business given a resulting p value of .002 which is  $<.05$  level of significance.

**Table 4:** Comparison of Entrepreneurial attitude and intention between DLSL and WU

	DLSL	WU	t value	p value	VERBAL INTERPRETATION
Perceived Importance	4.3673	4.4305	-.783	.434	Not significant
Self-Assessment	4.2876	4.0019	4.264	.000	Significant
respondents' attitudes towards entrepreneurs and entrepreneurship	3.2032	3.5195	-4.861	.000	Significant
perceived importance of select benefits and values	4.1727	4.1595	.168	.867	Not significant
perceived benefits and implications of starting own business	4.1092	4.0025	1.537	.125	Not significant
perceived prerequisites in starting a business	3.9419	3.8203	1.518	.130	Not significant
extent to which prerequisites act as barriers	3.1743	2.9346	2.154	.032	Significant
degree of influence of identified influencers	2.5210	2.5889	-1.554	.121	Not Significant
Intent	1.2826	1.1271	3.115	.002	Significant

## IV. Conclusions and Recommendations

### Conclusions

Majority of the respondents were aged 19-20 which comprised 58.38% followed by 17-18, 37.30% and only 8 or 4.32% covered the age group of 21-22 for DLSL. On the other hand, majority of the WU respondents came from age group of 21-22 which comprised of 61%, followed by 23-24 yrs. of age (16.10%), 19-20 yrs. old (12.7%), 18 yrs. old (7%) and 25-26 yrs. old (2.54%). In terms of gender, majority of the business students who participated in the study were female consisting of 71% with only 29% male for DLSL while for WU, it was well participated by male consisting of 59.32%, while female participation was only 40.6%. There is a minimal gap between the expectations of the respondents and their self assessment on the specific qualities that are critical to entrepreneurship success except for determination, persistence and confidence where the respondents assessed themselves with low rating. Having a good attitude, the respondents give a good impression that majority of the respondents in both institutions would be likely to engage themselves in entrepreneurial activities someday. Though aware of the prerequisites of starting their own business, the respondents are also aware of the barriers or doubts in terms of their ability in putting up their

own business someday such as reluctance to work long hours and taking risks when they start their own business. There is a significant difference between DLSL and WU's respondents concerning their attitudes towards entrepreneurs and entrepreneurship as well as the respondents attitude on the extent to which prerequisites act as barriers.

## Recommendations

The proponent would like to recommend the following:

- a. to increase the sample size and to provide update information regarding the subjects.
- b. come up up with a comparative study between business students and non business (local and international)
- c. further investigation and review on the quality of business program curriculum offered by both institutions

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# **Effect of Problem-Based Service Learning on the Civic Consciousness of Students Enrolled in the National Service Training Program of De La Salle Lipa**

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## **Abstract**

As the required service learning subject for all Filipino college students, the National Service Training Program (NSTP) seeks to continually enhance their civic consciousness by making them active participants in the decision-making and problem-solving processes of their partner communities. This research study aimed to look into the extent by which a problem-based approach in service learning can enhance the civic consciousness of students enrolled in NSTP. A descriptive research in the form of pre-test-post-test equivalent groups was utilized. One NSTP section with 37 students assigned under the Health and Nutrition (feeding) program in Bolbok Elementary School in Lipa City served as the respondents. Primarily, the students were oriented about the concepts of problem-based learning and service learning in class, with a discussion on the step-by-step procedure of coming up with a written project proposal. During the pre-test phase, they were asked to answer the Scale on Civic Consciousness (SCC), the data gathering instrument. Afterwards, they carried out actual service learning by completing the community visits to implement the feeding program, and creating a proposal based on the need of the partner school which they have identified. Oral presentation and final submission of the proposals were accomplished in class on the last meeting alongside the re-answering of the SCC as post-test. The results showed that NSTP students who are engaged in PBL as manifested by the completion of a written project proposal develop a deeper sense of civic consciousness. Positive results are noted in all five dimensions of civic consciousness based on the scale: personal identity and citizenship, national identity, moral consciousness, ecological consciousness and social citizenship. Statistically significant differences were also determined between the pre-test and post-test scores in these three dimensions: national identity, ecological consciousness and social citizenship. The strategy of making them write a project proposal as manifestation of being immersed in problem-based service learning is considered effective in carrying out the projects of NSTP.

**Keywords:** Community Service Learning, Problem-Based Learning, National Service Training Program, Civic Consciousness, De La Salle Lipa

## **Introduction**

According to Republic Act 9163 which was signed into law in 2002, the National Service Training Program (NSTP) is the mandatory community service subject of Filipino students in the college level starting school year 2002-2003 in exchange of the Reserve Officer Training Corps which comes in the form of exclusive military training for males. NSTP opened the doors for both male and female college students to engage in community-oriented activities, not only by means of providing military service to the country but also by taking active part in activities for the environment, for the general health and education of people in the community and for enhancing the literacy and numeracy skills of students.

NSTP is a subject both for service learning and problem-based learning. Service learning and problem-based learning are two distinct learning approaches but are highly related (McDonald and Ogden-Barnes, 2013). On the one hand, service learning is an approach by which students are required to comply with specific academic requirements while attending to the needs of the partner community where they are expected to provide service (Ross, 2012). NSTP is a form of service learning that integrates classroom instruction into the delivery of community service to further enhance the civic consciousness and community responsibility of the students (Balmeo et al., 2015). At the same time, service learning brings together students and community members in addressing community problems and issues as an avenue for connecting the community experiences with specific learning objectives (Gibson et al., 2011). This feature of service learning – that of contributing to the problem-solving capacity of the community – enhances its relevance to problem-based learning (PBL). PBL, with its many definitions and operational variants, is much just like service learning (Permaul, 2009).

On the other hand, PBL is a constructivism-based learning approach that lets students think, collaborate and create solutions to problems they encounter in a real-world setting. These solutions may reflect their personal, interpersonal and professional skills, as well as their academic learning (McDonald and Ogden-Barnes, 2013). The motivation to learn with this approach is the identification of a problem and there is a need for students to work collaboratively among themselves or with other people to arrive at a solution (University of Delaware, 2010). PBL is more comprehensive than problem-solving learning, since PBL goes beyond the mere provision of answers to questions or given problems relative to the curriculum (Savin-Baden, 2000).

A number of studies prove the effectiveness of a problem-based learning approach. For one, Downing, Ning and Shin (2011) conducted a study to measure the impact of PBL on student experience and metacognition. They have found out that PBL provides a conducive environment for students to do metacognition and enhances the overall student learning experience as compared with the traditional method of instruction. Since PBL brings with it new challenges for the students to face in a real-world setting, learning in it becomes more valuable. It is also useful when applied to service learning. Hartnett (2010) found out in his study that community service becomes more politically relevant and intellectually enriching with the use of problem-based learning. Similarly, a study made by Leigh and Clavenger (2013) looked into the effects of a problem-based service learning experience among American students who were immersed to community service in an elementary school in Costa Rica. Results showed that their experience highlighted the impact of service learning as manifested in their enhanced values, thinking and international understanding, civic responsibility and social connectivity. Through collaborative problem solving, mutual exchange of ideas and respect for cultural similarities and differences; students engaged in problem-based service learning exhibited increased commitment to become active participants in community activities.

The National Service Training Program Act of 2001 is signed into law primarily to develop and inculcate among the youth the value of civic consciousness as manifested in their physical, mental, social and spiritual being (LAWPHiL, 2002). In De La Salle Lipa (DLSL) this school year 2015-2016, NSTP is being implemented in two program components to realize this aim: the Civic Welfare Training Service (CWTS) component for its feeding program, computer tutorial and project for differently abled students in a public elementary school; and the Literacy Training Service (LTS) component for activities related to reading and numeracy programs among students in public elementary schools. NSTP at DLSL is a subject for service learning and is continually utilizing a problems-based approach as students are additionally required to make analyses of the current condition of their partner communities, to identify problems or

needs the community members might be facing and to think of a class project to address such needs. While it may be so, no previous study looking into the influence of problem-based service learning on the civic consciousness of NSTP students at DLSL. Perhaps if similar studies have already been conducted in other higher education institutions in the Philippines, access to them is still limited. As of the moment, there is limited research focusing on the expectations and experiences of students who engage in PBL through service learning activities (McDonald and Ogden-Barnes, 2013).

Taking into account the limited existence of research studies on problem-based service learning, the researcher seeks to determine the effect of problem-based service learning on the civic consciousness of students enrolled in the National Service Training Program for the first semester of school year 2015-2016.

### 1. Significance of the Study

Cited in the succeeding paragraphs are some of the valuable reasons why the study is important to the following persons and institutions which are affected by it.

#### **To De La Salle Lipa.**

The study is significant to the institution since it measures the influence of a particular type of learning approach (PBL) to one of the general education subjects of the college which is NSTP. The results of the study can partly be reflective of the quality of education that the institution offers to its students.

#### **To the National Service Training Program of DLSL.**

The study is an addition to the gradually increasing number of researches being conducted by faculty members in the NSTP area of DLSL. Its results might prove useful in further improving the NSTP curriculum and the conduct of learning activities in the subject in relation to the national thrusts of NSTP and the institution's mission and vision.

#### **To the NSTP students of DLSL.**

The study provides the DLSL students with research-based information regarding the effectiveness of learning activities that they accomplish in the subject to the enhancement of their personal and professional skills as students.

#### **To the researcher.**

The study brings a new learning experience and widens the knowledge and understanding of the researcher about community service learning, civic consciousness and problem-based learning.

### **To future researchers.**

The study can be useful to other researchers who plan to come up with their respective researchers which are related to or the same as this one. They can use the information, results and conclusions of this study as references.

## **2. Objectives**

The study aims to determine the effect of problem-based service learning on the level of civic consciousness of selected NSTP students of De La Salle Lipa for school year 2015-2016. Specifically, it seeks to answer the following questions:

- 1) What is the level of civic consciousness of the respondents before the community service learning (CSL) experience in terms of:
  - 1.a. personal identity and citizenship; 1.b. national identity;
  - 1.c. moral consciousness
  - 1.d. ecological consciousness; and 1.e. social citizenship?
- 2) What is the level of civic consciousness of the respondents after the CSL experience in terms of:
  - 2.a. personal identity and citizenship;
  - 2.b. national identity; 2.c. moral consciousness
  - 2.d. ecological consciousness; and 2.e. social citizenship?
- 3) How do the pre-test results and post-test results compare with each other in terms of:
  - 3.a. personal identity and citizenship;
  - 3.b. national identity; 3.c. moral consciousness
  - 3.d. ecological consciousness; and 3.e. social citizenship?

## **3. Assumptions**

Throughout the course of this research study, the following assumptions are made:

- 1) The respondents will actively participate and will honestly answer the questionnaire to determine their respective levels of civic consciousness twice (pretest and posttest).
- 2) There is a change in the level of civic consciousness among the NSTP students before and after exposure to the community service learning experience.
- 3) PBL affects the level of civic consciousness of the students as manifested by the change between the pretest and posttest scores.
- 4) The results of this research study will further influence the way in which NSTP is being implemented in De La Salle Lipa.

## **4. Scope and Limitations**

The results of this study are confined to the responses of forty students enrolled in the NSTPone subject for the first semester of school year 2015-2016. They are NSTP students who are conducting the feeding program at Bolbok Elementary School as their partner community once a week during their required 3-hour NSTP time.

Throughout the course of the study, the researcher will determine the levels of civic consciousness of the respondents before and after conducting their community service learning activities in the said public school.

The study is limited to the measure of civic consciousness of the NSTP students in the following areas or dimensions: personal identity and citizenship, national identity, moral consciousness, ecological consciousness and social citizenship. It is not used to generalize about civic consciousness based on other dimensions that might be discussed in other existing literature. Likewise, it is confined to the responses of NSTP students who are assigned to just one partner community, which is Bolbok Elementary School. The study bears no control on the effects of certain demographic data to the measure of the level of civic consciousness of the NSTP students. These may include their sex, gender, age and college affiliation, among others.

## 5. Operational Definition of Terms

### **Civic Consciousness.**

This refers to the awareness of issues and concerns happening in one's own community and the passion to act on them. It is one of the paramount values that NSTP students must imbibe as they take the subject. Particularly in this study, it is measured in the following dimensions: personal identity and citizenship, national identity, moral consciousness, ecological consciousness and social citizenship.

### **Community Service Learning (CSL).**

This refers to the actual visits made by the NSTP students to their partner community in order to carry out the required NSTP project under their chosen program component (feeding program or computer tutorial for CWTS and community reading program for LTS).

### **Ecological Consciousness.**

It is a dimension of civic consciousness relating to one's awareness of the need to take care of the environment as a vital component for national development.

### **Moral Consciousness.**

This is a civic consciousness dimension which is characterized by one's awareness of the right or wrong course of actions among citizens in the light of morally acceptable principles.

### **National Identity.**

This is a dimension of civic consciousness which is defined as one's capacity to identify with the actions and achievements of the government as representative of the "national society".

### **NSTPone.**

This refers to the first of the two-semester NSTP subject taken by most freshmen students of De La Salle Lipa during the first semester. This subject is characterized by classroom modules during the beginning part of the semester and community service learning experiences towards the end.

### **Personal Identity and Citizenship.**

This is defined to be a dimension of civic consciousness which is related to the awareness of one's rights, obligations and responsibility as an active citizen of the country.

### **Problem-based Service Learning.**

This refers to the application of a problem-based learning approach to community service learning. Specifically in this study, it is characterized by the use of PBL as an approach to let students come up with a project proposal as an additional requirement in the course of implementing the community service project assigned to them.

### **Project Proposal.**

A written document describing the potential project that NSTP students can implement in their partner community on top of the required NSTP program based on their chosen component: CWTS or LTS. It is based on the critical observations of the NSTP students regarding a pressing issue or need in their partner community. Parts of the project proposal include the title, names of the proponents, duration, objectives, project description (background, justification, benefits and coverage), methodologies, detailed budget and detailed schedule of activities.

### **Social Citizenship.**

This relates to a citizen's ability to identify with the different social groups where one belongs: the family as the basic social group, Asia as a larger society and the world in general.

## **6. Theoretical Framework**

This study adapts the four-phase Search, Solve, Create and Share (SSCS) Model (as cited in Chen, 2013) which is a framework attributed to problem-based learning. Although it is directed towards science instruction, its concepts are basically applicable in most disciplines. The simple concept of the SSCS model is illustrated below:

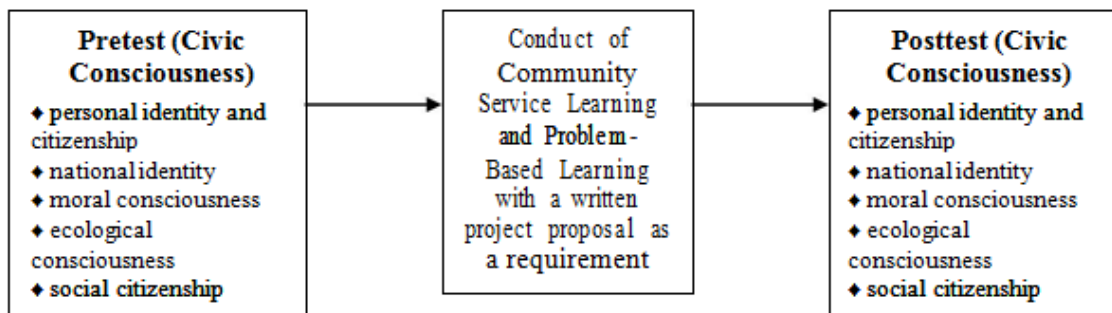


**Figure 1: The SSCS Model**

The model begins with students searching for an existing problem that they can later propose a solution to. This may come in the form brainstorming and generating a list of pressing issues or problems. Next, the students attempt to solve the problem by creating a draft of actions on how to arrive at a solution. This can be done by utilizing their critical and creative thinking skills. Third, students create a product (for instance, a formal write-up or the actual implementation of the plan) to solve the problem identified. Lastly, students share what they have accomplished to their teacher and peers, and in the process receive feedback for their work and an opportunity to make the necessary modifications to the plan.

## **7. Conceptual Framework**

The conceptual framework of the study, which is basically in the input-process-output structure, is illustrated below.



**Figure 2:** The Conceptual Framework of the Study

As seen in the diagram, input will come in the form of the responses of the NSTP students to the Scale on Civic Consciousness (SCC) for the National Service Training Program before exposure to CSL. This is done to measure their level of civic consciousness according to the scale's five dimensions. Respondents are then exposed to service learning using a problem-based learning approach. They are exposed to PBL with an additional requirement of coming up with a written project proposal for the community based on an identified problem or need. After the CSL experience, they are required to answer the SCC again, with comparison of the pretest and posttest scores afterwards.

## Methods

The study is classified as a descriptive type of research. This is a type of research that “enumerates what behaviors occur and in what quantity and frequency” (Elmes, Kantowitz and Roediger, 2012). As pretest and posttest scores are numerical in nature, it is further classified as a quantitative study.

More specifically, this study utilized the pretest-posttest design to measure the level of change in a particular variable after a certain treatment or intervention has been made in the participating groups of respondents (Shuttleworth, 2008). This research design is used to establish a comparison of the level of behavioral change among respondents when certain variables have been modified (Dimitrov and Rumrill, 2003).

### 1. Participants

The participants of the study are selected freshmen students enrolled in NSTPone (the first NSTP subject required to be taken up before NSTPtwo) during the first semester of school year 2015-2016. They are assigned in Bolbok Elementary School as their partner community. The researcher is the NSTP teacher of the respondents as they conduct the feeding program in the said public elementary school.

### 2. Data Gathering Procedures

Prior to this study, the researcher has developed a Scale on Civic Consciousness (SCC) for the National Service Training Program on a separate research study. Confirmatory Factor Analysis (CFA) was utilized to evaluate the items of the scale: it was able to prove the effectiveness of the scale to measure civic consciousness and it yielded five dimensions under this concept: personal identity and citizenship, national identity, moral consciousness, ecological consciousness and social citizenship.

Before the start of the CSL by the students in Bolbok Elementary School, they were oriented about problem-based learning, with an additional discussion on how a written project proposal is accomplished. Administration of SCC was done afterwards (pretest).

Based on the SSCS model of PBL, the respondents were constantly reminded of the need to search for an issue or a problem existing in the partner community which they can possibly address in the form of a written project proposal. The students are reminded to employ direct observation and oral interviews to determine a pressing problem or need of the community.

After the CSL experience, the respondents were required to present the output they have had based on PBL. This was done on the last NSTP meeting of the semester which is just held in the classroom. The respondents submitted their respective written project proposals which were also briefly shared in class. Re-administration of the SCC was done as posttest.

### 3. Instrument

The data gathering instrument is the Scale on Civic Consciousness (SCC) for the National Service Training Program developed by the researcher through a separate research study. The tool is a twenty-item questionnaire with positively stated statements expressed in the first-person perspective. Through confirmatory factor analysis, items were proven effective and five dimensions have been identified to be measurable by the scale: personal identity and citizenship, national identity, moral consciousness, ecological consciousness and social citizenship.

### 4. Statistical Treatment of Data

The pretest and posttest scores of the participants to the SCC will become the basis for obtaining the results of this research study. Particularly, the following statistical tools will be used: frequency to determine the total number of responses for each dimension of SCC; arithmetic mean to get the average scores obtained by the participants for each item of the SCC and to acquire the mean scores of all items belonging to each dimension; and t-test to determine whether PBL and a written project proposal as evidence of their participation in one problem-solving process of the community can enhance the level of civic consciousness of NSTP students for the first semester of school year 2015-2016.

## Results and Discussion

The responses made by the NSTP students to each item of the Scale on Civic Consciousness (SCC) during the pre-test and post-test phases were tallied, compared and interpreted. The five factors measured by the SCC were likewise compared in terms of the mean scores of the responses for both pre-test and post-test to identify any statistical significance.

**Table 1:** Mean Scores for Factor 1 of the Scale on Civic Consciousness

Factor 1: Personal Identity and Citizenship	Pre-test		Post-test	
	Weighted Mean	Verbal Interpretation	Weighted Mean	Verbal Interpretation
Item 1: I am aware of my rights and obligations as a Filipino citizen.	4.62	Strongly Agree	4.73	Strongly Agree
Item 2: I protect my rights and interests as a citizen of this nation.	4.68	Strongly Agree	4.81	Strongly Agree
Item 6: I am proud to be a Filipino wherever I go.	4.76	Strongly Agree	4.81	Strongly Agree
Item 7: I am willing to participate in politically related activities especially if they will be for the benefit of the Filipino people.	4.51	Strongly Agree	4.41	Strongly Agree
Item 8: I strive to avoid violating any laws in my country, so that I would not need to answer against them.	4.54	Strongly Agree	4.62	Strongly Agree
Item 9: I uphold the principle that “everyone is equal before the law.”	4.70	Strongly Agree	4.70	Strongly Agree
Composite Mean	4.64	Strongly Agree	4.68	Strongly Agree

Table 1 presents the mean scores of the responses made for the first factor being measured by the Scale on Civic Consciousness which is personal identity and citizenship. The table above shows that almost all indicators increase on the post-test as compared with the pre-test results except for item 7, I am willing to participate in politically related activities especially if they will be for the benefit of the Filipino people, which also has the lowest mean scores for both pre- and post-tests. Item 6, which states “I am proud to be a Filipino wherever I go,” has the highest pre- and post-test mean scores. Item 2, I protect my rights and interests as a citizen of this nation, ties with item 6 at 4.81 for the highest mean score in the post-test phase. Based on the composite mean, both the pre-test and post-test results showed that the respondents strongly agree on the above indicators. All these positive findings on the effect of problem-based service learning on personal identity and citizenship coincide with the findings made by Tapia (2010) that service learning is intended to improve student citizenship and academic achievement while attending to the needs of the community. Similarly, Melaville, Berg and Blank (2006) have found out that by addressing problems or concerns in the community they serve, students are better able to acquire the necessary knowledge, skills and attributes of effective citizenship.

**Table 2:** Mean Scores for Factor 2 of the Scale on Civic Consciousness

Factor 2: National Identity	Pre-test		Post-test	
	Weighted Mean	Verbal Interpretation	Weighted Mean	Verbal Interpretation
Item 3: I subscribe to the decisions made by persons in authority, especially those in the government.	4.24	Strongly Agree	4.62	Strongly Agree
Item 4: I believe that the current system of government in the Philippines is most suitable for its national conditions.	3.49	Agree	3.76	Agree
Item 5: I am a witness to the achievements made by the Philippines in various disciplines.	3.86	Agree	4.11	Agree
Item 18: I take action with issues happening in my arangay/city/municipality.	3.70	Agree	4.14	Agree
Composite Mean	3.82	Agree	4.16	Agree

Table 2 shows the mean scores of the items belonging to factor 2, which is national identity. Item 3 (I subscribe to the decisions made by persons in authority, especially those in the government) has the highest mean among the given indicators both on the pre-test and post-test results. All the mean scores on the post-test increased as compared with the pre-test. The indicator I believe that the current system of government in the Philippines is most suitable for its national conditions has the lowest mean score both on the pre- and post-test phases. Nevertheless, the composite pre-test and post-test mean scores reveal that the respondents agree on the indicators for this factor, as evidenced by per-item mean scores which just fall either on strongly agree or agree. Results agree with the study conducted by Foran (2004) which found out that when concepts of social studies are integrated with service learning, students are better able to connect their perspective of national identity at the local-school level. Service learning and social studies facilitate the intertwine of present-day realities into the curriculum, thereby providing opportunities for students to solve problems in their community and be active participants in matters relating to democracy and the government.

**Table 3:** Mean Scores for Factor 3 of the Scale on Civic Consciousness

Factor 3: Moral Consciousness	Pre-test		Post-test	
	Weighted Mean	Verbal Interpretation	Weighted Mean	Verbal Interpretation
Item 10: I put an effort to abide by some of the most common laws of my country (traffic rules, waste segregation).	4.59	Strongly Agree	4.46	Strongly Agree
Item 11: I strive to perform my roles in the society in the most honest and prudent way possible.	4.57	Strongly Agree	4.62	Strongly Agree
Item 12: I put my full trust and confidence in the integrity and abilities of my fellow Filipinos.	4.38	Strongly Agree	4.51	Strongly Agree
Item 14: I believe that for the society to practice morality, it must start with individual citizens.	4.76	Strongly Agree	4.84	Strongly Agree
Item 15: I practice moral values whether at home or in school.	4.46	Strongly Agree	4.65	Strongly Agree
Composite Mean	4.55	Strongly Agree	4.62	Strongly Agree

Mean scores of the indicators for factor 3 which is moral consciousness are shown in table 3. All items under this factor have mean and composite mean scores that fall under strongly agree. Item 14 which states, “I believe that for the society to practice morality, it must start with individual citizens,” garners the highest scores for both pre- and post-tests. The lowest mean is computed for item 12, I put my full trust and confidence in the integrity and abilities of my fellow Filipinos, both for pre-test and post-test. The results coincide with the findings made by McDonald and Ogden-Barnes (2013) who, as previously discussed, considered service learning and problem-based learning as highly relevant disciplines. According to them, there are indeed various literatures proving the positive effect of active service learning involvement on student moral development. Likewise, positive ratings brought about by problem-based service learning as reflected on this factor of civic consciousness agree with the findings made by Park, Helm, Kipley and Hancock (2009) on their study regarding the relationship between Christian faith and personal values and community service learning. According to them, students make good sense of their service learning experience when they exhibit moral behaviour anchored on the ideals of their faith.

**Table 4:** Mean Scores for Factor 4 of the Scale on Civic Consciousness

Factor 4: Ecological Consciousness	Pre-test		Post-test	
	Weighted Mean	Verbal Interpretation	Weighted Mean	Verbal Interpretation
Item 16: I believe that Filipinos do not hold the full right to exploit nature for their economic benefits, since natural resources are finite.	4.24	Strongly Agree	4.51	Strongly Agree
Item 17: I am cautious about my actions especially if they will have hazardous effects on nature.	4.41	Strongly Agree	4.57	Strongly Agree
Composite Mean	4.32	Strongly Agree	4.54	Strongly Agree

Table 4 presents the fourth factor, ecological consciousness, with the mean scores of its two indicators. Both indicators yielded higher post-test mean scores as compared with their respective pre-test mean. Higher mean scores were obtained by item 17 (I am cautious about my actions especially if they will have hazardous effects on nature) both on pre- and post-tests. Composite mean scores of both pre- and post-tests show that the respondents strongly agree on the above indicators. These results also agree with what Melaville, Berg and Blank (2006) have presented on the positive effects of community-based problem solving which includes environmental education. They presented a study showing that one of the most immediate results of community-based learning is an increase in the students' knowledge about the natural environment and its issues. Likewise, in a study conducted by Eisenhut and Flannery (2005) to establish connections between service learning and environmental education, they concluded that students' active participation and engagement in service learning improved their environmental responsibility and conviction to decide on issues in favour of saving the environment.

**Table 5:** Mean Scores for Factor 5 of the Scale on Civic Consciousness

Factor 5: Social Citizenship	Pre-test		Post-test	
	Weighted Mean	Verbal Interpretation	Weighted Mean	Verbal Interpretation
Item 13: I follow the values and virtues which my family upholds.	4.65	Strongly Agree	4.84	Strongly Agree
Item 19: I am concerned with issues happening in the country or in the world.	4.08	Agree	4.51	Strongly Agree
Item 20: I often update myself with issues happening in Asia or in the world	3.81	Agree	4.27	Strongly Agree
Composite Mean	4.18	Agree	4.54	Strongly Agree

Table 5 shows the mean scores of indicators that are categorized under factor 5 of civic consciousness, social citizenship. Highest mean scores for pre- and post-tests were obtained by responses in item 13, I follow the values and virtues which my family upholds. Lowest pre-test and post-test mean scores belong to item 20, I often update myself with issues happening in Asia or in the world. Improvement in the composite mean is seen in the table as the score for the pre-test falls under agree, while composite mean for post-test shows that respondents strongly agree with the indicators. Positive effects of problem-based service learning as reflected on the table results coincide with the outcomes of service learning enumerated by Bandy (2016). According to him, the social outcomes of service learning include improved social responsibility and citizenship, and greater awareness of social issues.

**Table 6:** Comparison of the Pre-test and Post-test Scores for Each Factor of the Scale on Civic Consciousness

Level of Civic Consciousness	Mean		t-value	p-value	Verbal Interpretation
	Pre-test	Post- test			
Factor 1: Personal Identity and Citizenship	4.6349	4.6795	-.704	.486	Not Significant
Factor 2: National Identity	3.8243	4.1554	-3.229	.003	<b>Significant</b>
Factor 3: Moral Consciousness	4.5514	4.6162	-.993	.327	Not Significant
Factor 4: Ecological Consciousness	4.3243	4.5405	-2.462	.019	<b>Significant</b>
Factor 5: Social Citizenship	4.1803	4.5411	-4.287	.000	<b>Significant</b>

Table 6 shows that there is a statistically significant difference between the mean before and after the community service learning specifically on three factors being measured by the scale on civic consciousness: national identity, ecological consciousness and social citizenship. It was revealed that all mean scores on the post-test were greater than their counterparts for the pre-test, which means that respondents have a significantly higher level of civic consciousness after immersing themselves in problem-based learning as part of their community service learning experience. This finding agrees with the study made by Hartnett (2010) that community service learning becomes more rewarding for students if problem-based learning is integrated into it. It also agrees with the results of the study conducted by Leigh and Clavenger (2013) that problem-based learning as part of students' community service experience has the capacity to develop civic responsibility, social connectivity and international understanding and to sustain their active participation and commitment in community-oriented activities.

## Conclusion and Recommendations

This study evaluated the effect of the community service learning experiences of Lasallian students enrolled in the National Service Training Program to their level of civic consciousness. Specifically, problem-based service learning was employed as both PBL and service learning are found to complement each other. In the conduct of community service, the respondents were additionally tasked to formulate a written project proposal as proof of employing PBL in the course of the service learning experience. In all, findings have revealed that improvement in all five factors of civic consciousness are evident from the pre-test to the post-test responses of the National Service Training Program (NSTP) students who answered the Scale on Civic Consciousness (SCC). The five factors of civic consciousness which were positively affected by the students' problem-based service learning experiences are personal identity and citizenship, national identity, moral consciousness, ecological consciousness and social citizenship. Additionally, statistically significant differences in the pre-test and post-test

mean scores are reflected in three factors: national identity, ecological consciousness and social citizenship. This means that problem-based service learning really yielded a positive effect on the level of consciousness of students enrolled in the NSTP subject. The way NSTP was taught to the respondents with a final requirement of a written project proposal as evidence of active participation in a problem-solving activity of the community became effective in improving their level of civic consciousness.

Based on the findings of this study, the researcher makes the following recommendations for future similar researches: to conduct an experimental research to identify the effect of problem-based learning on two different groups of NSTP students; to initiate a similar study in other higher educational institutions in Lipa City or in nearby cities and municipalities; to assess the level of civic consciousness of NSTP alumni of De La Salle Lipa; and to conduct a comparative study on the levels of civic consciousness of selected NSTP students and their benefactors in the community.

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# Assessment of the Student Services of De La Salle University Dasmariñas College of Education Graduate Studies: Basis for a Proposed Enhancement Program

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## Abstract

The study aims to assess the student services of the College of Education Graduate Studies (COEGS) of De La Salle University Dasmariñas for a proposed enhancement program. The main sources of data came from the graduate students of the College of Education enrolled in A.Y. 2015-2016. A validated questionnaire was designed highlighting the different student services of the college. Findings from the study showed that the students are very familiar in the library, canteen or food services, bookstore, payment centers and classrooms. However, students are somewhat familiar to the university clinic and campus ministry office. In terms of extent of usage, the results showed that students are always using the classroom and canteen services. However, they rarely used the University Research Office (URO), University Clinic, and Campus Ministry Office. With regard to the level of satisfaction, finding shows that the students are very satisfied in the classrooms and physical maintenance and cleanliness services of the university. However, students are dissatisfied in the services of university clinic and campus ministry office. Based on these findings, the need to have an Action Plan on Student Services Enhancement Program will help improve students' level of familiarity, extent of usage and level of satisfaction to all the student services being offered by the College of Education Graduate Studies of De La Salle University Dasmariñas.

**Keywords:** Student Services, College of Education, Graduate Studies, De La Salle University Dasmariñas

## Introduction

Student services have always been an integral part of the university graduate student's educational experience. In today's educational and working environment, student services play an even more important role in the quality of graduate student life. The wide-ranging resources provided by student services are a key strength of residential colleges and universities. Student services are essential to the educational mission—not imaginatively connected to the core of

learning—and without them, one of the most powerful arguments for the continuation of residential education will be lost. The intentional integration of coursework and broad student services provides a full educational environment; increasing attention to student services creates an integrated field of experience across students' curricular, residential, and social lives. After all, everything is education—every action and interaction is an opportunity for learning and cultivation.

With campuses becoming more diverse, it is important for the university to consider how their services will impact the variety of students that are served. As graduate students strive to obtain degrees, they face many academic challenges. Student services are the ways and means to provide additional help to the students. Choudhry, et. al. (2008) points out that the structure and activities of student services are dependent upon the infinite needs of the learners and these services lead to the realization of the instructional objectives of the institution (Gupta and Ghugtai, 2002).

In the Philippines, government subsidy for public tertiary institutions has been steadily dwindling over the years, while student tuition in private colleges and universities has been steadily rising. Sixty percent of government subsidy for public colleges and universities is earmarked for faculty salaries, with the bulk of the remainder goes to infrastructure maintenance and the salaries of all non-academic personnel, with little left, if any, for student service programs and activities. Typical student services include: 1) scholarships and financial aid; 2) counseling and guidance; 3) health services; 4) student learning assistance; 5) food and cafeteria; 6) residence halls; 7) assistance to international students, and 8) supervision of student activities, especially social action programs. All Catholic institutions have, in addition, Campus Ministry Offices and Offices for Social Concern and Involvement. Problems and concerns facing many Filipino typical colleges and universities today include: 1) lack of funds, facilities, especially computer hardware and software to support student services; 2) lack of personnel resulting in an overburdened student services practitioners; and 3) lack of trained staff for seeking "greener pastures" in other professions. These concerns are understandable within the larger context of Philippine social and economic realities. Most student services offices in these colleges and universities are considered subservient to the academic community. They serve merely as a support system to the academic life of graduate students in these tertiary level institutions with post graduate studies.

De La Salle University has a program of student services, directed and coordinated by a professionally trained staff, is an integral part of institutional planning and operation of DLSU D. This program is designed to assist the individual student to attain maximum self-realization and to become effective in his social environment. The institution's program of student services should complement the academic program (Philippine Accrediting Association of Schools, Colleges and Universities Standards).

It is in this light that the researchers who are the students of De La Salle University Dasmariñas in the College of Education Graduate Studies taking up Doctor of Philosophy in Educational Management, are motivated to conduct this study in relation to their major subject, Management of Student Services. They believe that this study will provide the administrators of the COEGS with data and information on how to develop different student services programs so to improve the graduate students' levels of familiarity and satisfaction with regards to the services they offer. The researchers are also motivated to conduct this study to be able to share their knowledge and skills that they believe will help the college in formulating student services development program for all the graduate students of the College of Education Graduate Studies at DLSU-D.

## **Statement of the Problem**

The major purpose of the study is to evaluate the following student services of the De La Salle University Dasmariñas College of Education Graduate Studies so as to propose student services enhancement program.

Specifically, the study sought to answer the following questions:

1. What is the students' level of familiarity to the student services offered by the College of Education Graduate Studies?
2. What is the students' extent of usage to the student services offered by the College of Education Graduate Studies?
3. What is the students' level of satisfaction to the student services offered by the College of Education Graduate Studies?

## **Paradigm of the Study**

The assessment of the student services of the College of Education Graduate Studies of De La Salle University Dasmariñas helped the researchers to be able to come up with appropriate enhancement programs to improve the different components of student services that COEGS offers to their students. The research also determined the familiarity, usage and satisfaction of the graduate students with all the services they received from the student services which would serve as determinants of each component and became the basis in designing a proposed enhancement program. These services are:

### **University Research Office**

This refers to a service unit that coordinates the research activities of the university. The office primarily provides the support environment for educational research projects and research skills development.

### **Library / AEA. DLSU-D's library**

It houses collections of books, periodicals, theses, and other reference materials. Also, it houses the Electronic Resource Services (the Internet nook), the Educational Media Services (which holds such media as videos, slides, presentations, and the like), as well as four viewing and conference rooms.

**University Clinic.**

This refers to a healthcare facility that is primarily to promote the health and well-being of the De La Salle University – Dasmariñas community.

**Campus Ministry Office**

This refers to a service unit that aims to provide meaningful, relevant, inculturated and dynamic liturgical celebrations and devotional practices, especially the Holy Eucharist, and provides opportunities for the members of the community to participate in the life of the Church through community building and faith sharing activities.

**Canteen Services / Food Services**

This term refers to a service rendered by the cafeterias/canteens/eateries responsible for any meal prepared for the students and personnel.

**Bookstore**

This refers to a bookshop within De La Salle University – Dasmariñas.

**Payment Centers**

This refers to a place/area where payment can be made. This also refers to banks and other payment service providers that offer shops online services for accepting electronic payments by a variety of payment methods including credit card, bank-based payments such as direct debit, bank transfer, and real-time bank transfer based on online banking.

**Parking Area**

This refers to a location that is designated for parking, either paved or unpaved utilized by the students of the College of Education Graduate Studies De La Salle University Dasmariñas.

**Classrooms: Lights and Aircon Units**

These terms refers to a learning area with adequate lighting and are fully air conditioned used by the students of the College of Education Graduate Studies De La Salle University Dasmariñas.

**IT Services**

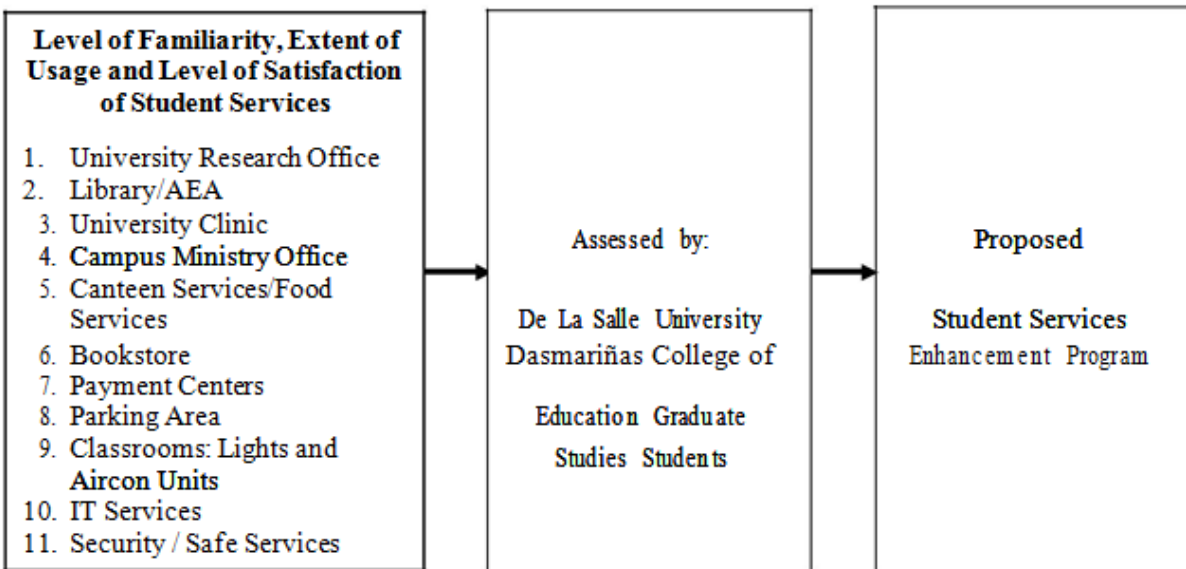
This refers to a service unit that handles the technical and systems development of university processes involving the areas information systems, network, technical services, and web development.

**Security / Safe Services**

This refers to a department that is responsible for providing security and safe services to students and personnel.

**Physical Maintenance and Cleanliness Services**

This refers to a service unit that supervises the upkeep of the physical assets of the University by overseeing the construction and maintenance of its facilities.



## Methodology and Research Design

This study utilized the descriptive method of research to assess the student services of the College of Education Graduate Studies, De La Salle University Dasmariñas for a proposed enhancement program. The respondents of this study were the enrollees of the College of Education Graduate Studies of De La Salle University Dasmariñas for the first semester of Academic Year 2015-2016. The purpose of this study is to assess the familiarity, usage and satisfaction of the student services performance to the present conditions that exists. The questions dealt with the level of familiarity, the extent of usage and level of satisfaction by the graduate students from the different services of College of Education Graduate Studies.

A survey questionnaire was the main data gathering instrument. The research questionnaire was composed of two sets. The first set was the Student Information Sheet. It covered the demographic information of the respondents such as program and major. The second set dealt on the level of familiarity of the different components of student services offered in the university, the extent of usage of these services and the level of satisfaction based on the experience of the respondents. Questionnaire for the level of familiarity, extent of usage and level of satisfaction was adopted and modified from the Student Satisfactory Survey of Southwestern College. Students were queried with regard to their familiarity on the 11 university services and departments. Likewise, five questions for each services and departments were asked also.

For items on the level of familiarity, extent of usage and level of satisfaction with the student services, the weighted points, score range and verbal interpretation are as follows:

**Table 1:** Scale Used in the Study (Likert Scale)

Scale	Range	Level of Familiarity Verbal Interpretation	Level of Extent of Usage Verbal Interpretation	Level of Satisfaction Verbal Interpretation
5	4.21 to 5.00	Very familiar	Always	Very Satisfied
4	3.41 to 4.20	Familiar	Often	Satisfied
3	2.61 to 3.40	Somewhat Familiar	Sometimes	Neutral
2	1.81 to 2.60	Not familiar	Rarely	Dissatisfied
1	1.00 to 1.80	Never heard of it	Never	Not applicable

**Table 2:** Profile of College of Education Graduate Studies Students

Program	Major	Frequency	Percentage
PhD	Educational Management	57	13.77
	Counselling	11	2.66
MA	Educational Management	176	42.51
	Guidance and Counselling	107	25.85
	Special Education	40	9.66
	Physical Education	23	5.56
TOTAL		414	100

Table 2 shows the profile of college of education graduate studies students of De La Salle University Dasmariñas 1<sup>st</sup> Semester Academic Year 2015-2016. Table shows that Masters of Arts in Education major in Educational Management has the most number of enrollees with 42.51% while Doctor of Philosophy major in Counselling has the least number of enrollees with 2.66%.

## Results and Discussion

**Problem 1:** What is the students' level of familiarity to the student services offered by the College of Education Graduate Studies?

**Table 3:** Students' Level of Familiarity to the Student Services

No.	Student Services	MEAN	Verbal Description
1	University Research Office	3.26	Somewhat Familiar
2	Library / AEA	4.54	Very Familiar
3	University Clinic	3.20	Somewhat Familiar
4	Campus Ministry Office	3.38	Somewhat Familiar
5	Canteen Services / Food Services	4.67	Very Familiar
6	Bookstore	4.56	Very Familiar
7	Payment Centers	4.46	Very Familiar
8	Parking Area	3.94	Familiar
9	Classrooms: Lights and Aircon Units	4.42	Very Familiar
10	IT Services	3.67	Familiar
11	Security / Safe Services	3.91	Familiar
12	Physical Maintenance and Cleanliness Services	4.01	Familiar
TOTAL MEAN		4.00	Familiar

Table 3 shows the students' level of familiarity to the student services offered by the College of Education Graduate Studies with a total mean of **4.00** that has a verbal description of

### **Familiar**

Finding reveals that COEGS students are very familiar in the library, canteen or food services, bookstore, payment centers and classrooms. However, students are somewhat familiar to the university clinic and campus ministry office with a mean of 3.20 and 3.38 respectively.

This shows that students are not well-oriented with the different services being offered by the university clinic and as well as the campus ministry office. The offices should conduct orientation program to the students so that they will be informed of the different kind of services that they can avail from the said offices.

Familiarity with students' services is very important. Purnell & Blank (2004) as cited by Dietsche (2012) claimed that offering an array of support services to meet the diverse needs of post-secondary learners assumes that these services improve success by providing students with compensatory resources and opportunities for engagement.

**Problem 2:** What is the students' extent of usage to the student services offered by the College of Education Graduate Studies?

**Table 4:** Students' Extent of Usage of Student Services

No.	Student Services	MEAN	Verbal Description
1	University Research Office	2.48	Rarely
2	Library / AEA	3.99	Often
3	University Clinic	1.89	Rarely
4	Campus Ministry Office	1.87	Rarely
5	Canteen Services / Food Services	4.51	Always
6	Bookstore	3.56	Often
7	Payment Centers	3.88	Often
8	Parking Area	2.77	Sometimes
9	Classrooms: Lights and Aircon Units	4.40	Always
10	IT Services	2.89	Sometimes
11	Security / Safe Services	3.44	Often
12	Physical Maintenance and Cleanliness Services	3.60	Often
TOTAL MEAN		3.27	Sometimes

Table 4 shows the students' extent of usage to the student services offered by the College of Education Graduate Studies with a total mean of **3.27** and verbal description as **Sometimes**.

Result suggests that students are always using the classroom and canteen services. However, they rarely used the University Research Office, University Clinic, and Campus Ministry Office with a mean of 2.48, 1.89 and 1.87 respectively.

The university should make a program that will let the students know the different services of the said office that they rarely used so that they will be able to utilize them properly.

Research shows that student's satisfaction correlates with the kind of student services the institution offered. Noel-Levitz (2004) as cited by Bailey-Chen (2007) claimed that a willingness to address student satisfaction issues enables institutions to systematically improve the quality of the educational experience and offer more educational value to students. Gray (1997) as cited by Bailey-Chen (2007) assessment may also serve the institution as an effective tool for fostering continual improvement, allowing institutions to attract and retain students.

**Problem 3:** What is the students' level of satisfaction to the student services offered by the College of Education Graduate Studies?

**Table 5:** Students' Level of Satisfaction to the Student Services

No.	Student Services	MEAN	Verbal Description
1	University Research Office	3.52	Satisfied
2	Library / AEA	4.13	Satisfied
3	University Clinic	2.52	Dissatisfied
4	Campus Ministry Office	2.50	Dissatisfied
5	Canteen Services / Food Services	3.94	Satisfied
6	Bookstore	3.69	Satisfied
7	Payment Centers	3.64	Satisfied
8	Classrooms: Lights and Aircon Units	4.45	Very Satisfied
9	IT Services	3.24	Neutral
10	Security / Safe Services	3.84	Satisfied
11	Physical Maintenance and Cleanliness Services	4.26	Very Satisfied
TOTAL MEAN		3.61	Satisfied

Table 5 shows the students' level of satisfaction to the students services offered by the college of education graduate studies with a total mean of **3.61** and verbal description as

**Satisfied.**

Finding shows that the students are very satisfied in the classrooms and physical maintenance and cleanliness services of the university. However, students are dissatisfied in the services of university clinic and campus ministry office with a mean of **2.52** and **2.50** respectively. The university should design a program that will help the students know the different services of the university for proper utilization specially those services that they are not satisfied.

Noel-Levitz (2004) as cited by Bailey-Chen (2007) purported that student satisfaction plays an important role in student engagement, retention, and learning. Research on college student satisfaction indicates that institutions with more satisfied students have higher graduation rates,

lower student loan default rates, and higher alumni giving. Satisfaction with an institution includes a combination of academic factors as well as areas related to campus services.

Likewise, Nerad (1997), cited by Butler (2002) claimed that improving the graduate culture through the provision of support services is a key element in attracting and retaining graduate students and providing them with a more fertile ground for success. Therefore, student satisfaction with regard to student services is very important.

## **Conclusion**

In the light of the foregoing findings, the study showed that there are 346 graduate students taking up Master of Arts in Education major in Educational Management, Guidance and Counselling, Special Education and Physical Education; a total of 68 graduate students taking up Doctor of Philosophy major in Education Management and Counselling.

Students' level of familiarity with the student services of the university has a general result of Familiar. However, the students are Somewhat Familiar in the university research office, university clinic and campus ministry office. Students' extent of usage of the student services of the university has a general result of Sometimes. However, they Rarely Used the university research office, university clinic and campus ministry office. Students' level of satisfaction with the student services of the university has a general result of Satisfied. However they are Dissatisfied to the university clinic and campus ministry office of the university.

## **Recommendation**

The College of Education Graduate Studies should come up with an enhancement program that will improve the students' level of familiarity, extent of usage and satisfaction to the different student services they offer. The university should come up with an enhancement program that will improve the level of familiarity to the different student services that they can avail especially those that they are not familiar with; encourage the students to maximize the use of the different student services; and evaluate the different services that the students found unsatisfactorily, to know the factors, and how to improve each service. It is recommended also that the university should organize an orientation program to improve the student's level of familiarity.

**Table 6:** Action Plan on Student Services Enhancement Program

Objectives	Key Results Area	Performance Indicator	Strategies/ Programs/ Activities	Time Frame	Concerned Unit/Person	Resources
To increase the awareness and familiarity of students on the different student services offered by the school such as University Research Office, University Clinic, and Campus Ministry Office	Level of familiarity	100% of students are aware and knowledgeable of the student services being offered by the school	<p>Organize a responsible and innovative Student Services Division that will be accountable for the operations of University Research Office, University Clinic, and Campus Ministry Office</p> <p>Conduct “Campus Orientation Program” for the entire COEDGS students on the first week of every semester</p> <p>Include description and clarification of each student service in the Student Manual.</p>	Year round	Dean Director Student Council Focal Person in each service Faculty	School Fund/ Self-funding

To maximize the usage of the student services that are rarely utilized by the COEDGS students such as University Research Office, University Clinic, and Campus Ministry Office	Utilization of student services/ Increase extent of usage	100% of students avail, enjoy and appreciate the different student services.	Provide schedule for every student in the utilization of those services which are rarely used	Year round	Dean Director Student Council Focal Person in each service Faculty	School Fund/ Self-funding
To increase the satisfaction level of students with regard to student services which they found unsatisfactorily such as University Clinic and Campus Ministry Office	Satisfaction Level	100% of students are highly satisfied of the student services offered by the school  90% Increase in retention rate on the next semester	Encourage the Student Council to promote the services offered by University Clinic and Campus Ministry Office  Lead, design and conduct researches to measure and assess the satisfaction level of students in the utilization of student services	Year round	Dean Director Student Council Focal Person in each service Faculty	School Fund/ Self-funding

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# **The Effects of Thai Martial Arts – Basic Muay Thai Training towards Physical Capacity of Bachelor Degree Students in Sport for Health Subject**

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## **Abstract**

The objective of this study is to examine the effects of Thai martial arts – basic Muay Thai training towards physical capacity of students. The sample group was 54 bachelor degree students of Ramkhamhaeng University in sport for health subject in 2<sup>nd</sup> semester of academic year 2015. The data collection were analyzed by physical capacity test developed by AAHPERD Association ICSPFT and SATST Test. The test included trunk forward flexion, 1 minute sit-ups, 800-meter run, body measurement and Muay Thai training of Academic Division, Department of Education Bangkok Metropolitan Administration. The data were analyzed via percentage, average, S.D., t-test, and one-way ANOVA. The findings revealed as follows:

1. Physical capacity of bachelor degree students of Ramkhamhaeng University in Sport for Health subject in 2<sup>nd</sup> semester of academic year 2015 before and after 4-week training between controlled group and experimental group has the same result in physical capacity test. While after 8-week training, the controlled group and the experimental group set level of significance at .051 on trunk forward flexion test.

2. Physical capacity of bachelor degree students of Ramkhamhaeng University in Sport for Health subject in 2<sup>nd</sup> semester of academic year 2015 before and after 4-week and 8-week training of the controlled group showed no statistical significance level at .05.

3. Physical capacity of bachelor degree students of Ramkhamhaeng University in Sport for Health subject in 2<sup>nd</sup> semester of academic year 2015 before and after 4-week and 8-week training of the experimental group set level of significance at .05 on 1 minute sit-ups and trunk forward flexion tests.

4.

**Keywords:** Physical Exercise, Basic Muay Thai, Physical Capacity, Students, Sport for Health, Physical Capacity.

## **Introduction**

Despite the phenomenon of materialism, Ramkhamhaeng University students have become increasingly negative lifestyle with irregular physical activity. Excessive comfortable lifestyle includes using elevator, sitting in front of computer and television, chatting on phone, or looking at mobile phone's screen. These kinds of activities are linked to negative health consequences. The risk is higher among those who are teenage students.

As a response to concerns over health, physical fitness has been promoted among the students. Physical fitness refers to a general state of health and well being that is achieved through a combination of good diet, regular physical exercise, and other practices that promote good health.

Moreover, it can also reduce risk factors for diseases due to lacking of exercise. In practice, health related physical fitness is made up of five basic components: Cardiovascular Endurance, Muscular Endurance, Muscular Strength, Flexibility, and Body Composition. This type of fitness has benefits to physical health from exercising and playing sports regularly.

Oxygen consumption exercise or Aerobics Exercise related to physical exercise in Basic Muay Thai Training includes body combination known as “the art of eight limbs” using a head (not in use now), two fists, two elbows, two knees, and two feet. This training is associated with physical fitness which promotes good health among the students in five aspects: Cardiovascular Endurance, Muscular Endurance, Muscular Strength, Flexibility, and Body Composition. Furthermore, researcher realized the importance of Muay Thai as the national sport and cultural martial art of Thailand which become engrained in the culture of Thai people. Pongtorn Sangwipark (235, 2013) also stated that the government should cooperate with private organizations to promote Muay Thai nationally as Thai cultural heritage and internationally accepted.

As a physical education teacher at Department of Physical Education of Ramkhamhaeng University, researcher is personally interested in physical fitness which applies basic Muay Thai for bachelor degree students. This aims to examine the effects of Thai martial arts – basic Muay Thai training towards physical capacity of students who studied sport for health subject in 2<sup>nd</sup> semester of academic year 2015 before training and after four weeks and eight weeks of training. Researcher expects to apply the effects from measurement and evaluation in develop the appropriate activities for physical fitness in the following semester and to promote Muay Thai in higher education syllabus.

## **Framework of the Study**

### **Purpose of Study**

1. To examine the effects of basic Muay Thai training towards physical capacity of students.
2. To compare the effects of basic Muay Thai training towards physical capacity before training and after four weeks and eight weeks of training.

### **Definition of Keyword**

1. Physical Exercise. A physical activity that needs basic skills and basic rules of sport. With no equipment required, but it is a body movement which suit all ages and sexes.
2. Basic Muay Thai. A combined use of fists, elbows, knees, and feet as basic weapons in physical exercise towards physical capacity.
3. Physical Capacity. Health related physical fitness made up of five basic components.
  - 3.1 Cardiovascular Endurance
  - 3.2 Muscular Endurance
  - 3.3 Muscular Strength
  - 3.4 Flexibility
  - 3.5 Body Composition
4. Students. Ramkhamhaeng University students who studied sport for health subject in 2<sup>nd</sup> semester of academic year 2015.
5. Sport for Health. 1-credit subject in Bachelor of Education, Faculty of Education, Ramkhamhaeng University which is a general education subject (HPR 1001). The objective of

this subject is to provide students knowledge about sports and exercise for health, to promote positive attitudes towards sports and exercise, and to generate a daily routine of exercise.

6. Physical Capacity Test. Four-program test emphasized on performance outcomes focusing on health adapted from AAHPER Youth Fitness test, ICSPFT test (Wiriya Boonchai, 133-168, 1986), and basic physical capacity test of Sports Authority of Thailand to suit learning context and environment for students.

### **Expected Outcome of the Study**

1. To examine the effects of basic Muay Thai training towards physical capacity.
2. To find a guideline of providing physical activity which suit for students in the following semesters.
3. To promote Muay Thai training in higher education syllabus.

## **Methodology**

The research on the title of “The Effects of Thai Martial Arts – Basic Muay Thai Training towards Physical Capacity of Bachelor Degree Students who Study Sport for Health Subject” is an experimental design. The independent variable is a basic physical exercise program and the dependent variable is physical capacity for health.

### **1. Population**

Population in this study is 98 Ramkhamhaeng University students composed of 57 male and 41 female students aged between 19-23 who studied sport for health subject in 2<sup>nd</sup> semester of academic year 2015.

### **2. Samples**

Samples are from multi-stages random sampling and simple random sampling (Surasak Amonrattanasak et al., 125, 2002) of 54 Ramkhamhaeng University students composed of 27male and 27 female students aged between 19-23 who studied sport for health subject in 2<sup>nd</sup> semester of academic year 2015.

Multi-stages random sampling has 3 steps:

Step 1 Divide students into 4 years’ duration. (Freshman, Sophomore, Junior, Senior)

Step 2 Divide students according to the department they study.

Step 3 Randomly choose students from each department from 4 years as representatives then use simple random sampling by drawing luck to get male and female students.

### **3. Research Tools**

Physical Capacity Test is a four-program test emphasized on performance outcomes focusing on health adapted from The American Association for Health, Physical and Recreation (AAHPER Youth Fitness Test), International Committee for the Standardization of Physical Fitness Test (ICSPFT) (Wiriya Boonchai, 133-168, 1986), and basic physical capacity test of Sports Authority of Thailand which divided into four programs as follows.

3.1 800-meter run measures cardiovascular endurance adapted from International Committee for the Standardization of Physical Fitness Test. (ICSPFT) (Wiriya Boonchai, 133-168, 1986)

3.2 One minute sit-ups measures muscular endurance and muscular strength adapted from The American Association for Health, Physical and Recreation. (AAHPER Youth Fitness Test) (Wiriyaa Boonchai, 133-168, 1986)

3.3 Trunk forward flexion measures flexibility of low back and thigh hip muscle adapted from International Committee for the Standardization of Physical Fitness Test. (ICSPFT) (Wiriyaa Boonchai, 133-168, 1986)

3.4 Body Composition adapted from basic physical capacity test of Sports Authority of Thailand (11, 2003) calculated from the Body Mass Index (BMI) calculation formula as follows.

$$\text{Body Mass Index: BMI} = \frac{\text{Weight (kilogram)}}{\text{Height}^2(\text{meter})}$$

Example

$$\text{Weight: 65 kilograms} = 26 \text{ kilograms/meter}^2$$

$$\text{Height: 1.58}^2 \text{ meters}$$

### Data Collection

1. Choose the physical capacity test which is suitable for the learning context and environment to promote physical fitness for students.

2. Study the detail of basic Muay Thai training and prepare materials and location for the training.

3. Make an appointment with the sample group of students to give details of this study; for example, purpose of the study, research methodology, scope of the study, etc.

4. Divide the samples into small groups to set a group rotation schedule to take the physical capacity test.

5. Do the experimental test with the sample group. The test is divided into four programs. The purpose of the test was explained and demonstrated at the beginning. Researcher and researcher's assistants recorded the results of physical capacity.

6. The samples do the group rotation in the four-program test.

7. Before the test, the samples were divided into two small groups: one group was the experimental group and the other was the controlled group.

8. The experimental group was trained for basic Muay Thai three times a week (Monday, Wednesday, Friday) for eight weeks. Do the physical exercise 30 minutes a day (from 7.30 a.m. to 8.00 a.m.). There are eight steps in each pose: 1) Step right counts one-two-three-four-five-six-seven-eight and count down eight-seven-six-five-four-three-two-one then do the same with step left 2) Step right and left for eleven times. Complete each set by repeating step right and left for three times and record the results. It takes ten minutes for each set.

9. The controlled group is able to do the routine activity.

10. The sample groups do the physical capacity test after basic Muay Thai training after four weeks and eight weeks of training The result was recorded.

### Data Analysis

1. The data was analyzed via x-bar ( $\bar{x}$ ) and standard deviation (S.D.) from each physical capacity test score.

2. The test score results of the experimental and the controlled groups were compared via t-test before and after four weeks and eight weeks of training.

3. The results of basic Muay Thai training were determined via one-way analysis of variance (ANOVA) before and after four weeks and eight weeks of training. If it reveals a

statistically significant result, the paired Scheffe test will be used to adjust the significance levels.

4. The data analysis will be shown in tables with explanation.

## Results

**Table 1:**  $\bar{x}$ , S.D. and t-test value of physical capacity test score results of the experimental and the controlled groups before training.

Program	Before training				
	Controlled group		Experimental group		t
	$\bar{x}$	SD	$\bar{x}$	SD	
1. One minute sit-ups	26.05	6.59	26.15	5.10	.018
2. 800-meter run	4.10	0.24	3.40	0.47	.914
3. Trunk forward flexion	3.00	5.20	3.39	5.94	.907
4. Body composition	15.14	2.97	16.54	2.20	-.784

p > .05

From table 1 can be explained as follows:

1. The average of physical capacity for health of the controlled group before training showed that one minute sit-ups average is at 26.05 times/minute, 800-meter run average is at 4.10 minutes, trunk forward flexion average is at 3.00 cm, and the body composition average is at 15.14 km/m.

2. The average of physical capacity for health of the experimental group before training showed that one minute sit-ups average is at 26.15 times/minute, 800-meter run average is at 3.40 minutes, trunk forward flexion average is at 3.39 cm, and the body composition average is at 16.54 km/m.

3. The t-test score value of the experimental and the controlled groups in physical capacity for health before training in every program did not reveal a statistically significant result at .05.

**Table 2:**  $\bar{x}$ , S.D. and t-test value of physical capacity test score results of the experimental and the controlled groups after four-week training.

Program	After four-week training				
	Controlled group		Experimental group		t
	$\bar{x}$	SD	$\bar{x}$	SD	
1. One minute sit-ups	27.56	6.24	27.54	4.74	-.089
2. 800-meter run	4.11	0.35	4.12	0.40	.137
3. Trunk forward flexion	4.48	4.89	6.27	4.25	1.325
4. Body composition	17.84	2.58	16.74	2.24	-1.186

p > .05

From table 2 can be explained as follows:

1. The average of physical capacity for health of the controlled group after four-week training showed that one minute sit-ups average is at 27.56 times/minute, 800-meter run average is at 4.11 minutes, trunk forward flexion average is at 4.48 cm, and the body composition average is at 17.84 km/m.

2. The average of physical capacity for health of the experimental group after four-week training showed that one minute sit-ups average is at 27.54 times/minute, 800-meter run average is at 4.12 minutes, trunk forward flexion average is at 6.27 cm, and the body composition average is at 16.74 km/m.

3. The t-test score value of the experimental and the controlled groups in physical capacity for health after four-week training in every program did not reveal a statistically significant result at .05.

**Table 3:**  $\bar{x}$ , S.D. and t-test value of physical capacity test score results of the experimental and the controlled groups after eight-week training.

Program	After eight-week training				
	Controlled group		Experimental group		t
	$\bar{x}$	SD	$\bar{x}$	SD	
1. One minute sit-ups	28.57	6.41	30.49	4.83	1.078
2. 800-meter run	4.92	0.49	4.65	0.37	-.579
3. Trunk forward flexion	4.13	5.10	6.83	4.74	2.217*
4. Body composition	16.75	2.65	16.20	2.82	-.572

\*p < .05

From table 3 can be explained as follows:

1. The average of physical capacity for health of the controlled group after eight-week training showed that one minute sit-ups average is at 28.57 times/minute, 800-meter run average is at 4.92 minutes, trunk forward flexion average is at 4.13 cm, and the body composition average is at 16.75 km/m.
2. The average of physical capacity for health of the experimental group after eight-week training showed that one minute sit-ups average is at 30.49 times/minute, 800-meter run average is at 4.65 minutes, trunk forward flexion average is at 6.83 cm, and the body composition average is at 16.20 km/m.
3. The t-test score value of the experimental and the controlled groups in physical capacity for health after eight-week training in three programs did not reveal a statistically significant result at .05. Except trunk forward flexion program revealed a statistically significant result at .05.

**Table 4:** Result of viability analysis of physical capacity test score of the controlled group who study bachelor degree at Ramkhamhaeng University students after four-week and eight-week training.

	Origin of Viability	SS	df	MS	F
One minute sit-ups	Paired group	70.241	2	30.415	0.675
	In group	4674.168	105	47.213	
	Total	4744.409	107		
800-meter run	Paired group	0.119	2	0.083	.245
	In group	24.947	105	0.361	
	Total	25.066	107		
Trunk forward flexion	Paired group	40.864	2	20.241	.514
	In group	2564.672	105	26.648	
	Total	2605.536	107		
Body composition	Paired group	18.744	2	8.723	.137
	In group	6289.054	105	58.698	
	Total	6307.798	107		

p > .05

From table 4 can be explained that the result after four-week and eight-week training in physical capacity for health in the controlled group who study bachelor degree at Ramkhamhaeng University students did not reveal a statistically significant result at .05.

**Table 5:** Result of viability analysis of physical capacity test score of the experimental group who study bachelor degree at Ramkhamhaeng University students after four-week and eight-week training.

	Origin of Viability	SS	df	MS	F
One minute sit-ups	Paired group	272.416	2	130.754	4.386*
	In group	3284.295	105	30.192	
	Total	3556.711	107		
800-meter run	Paired group	.988	2	.546	2.076
	In group	25.455	105	.366	
	Total	26.443	107		
Trunk forward flexion	Paired group	164.153	2	88.224	3.015*
	In group	2568.412	105	28.663	
	Total	2732.565	107		
Body composition	Paired group	33.543	2	16.253	.211
	In group	8273.417	105	78.426	
	Total	8306.96	107		

\*p <.05

From table 5 can be explained that the result after four-week and eight-week training in physical capacity for health in the experimental group who study bachelor degree at Ramkhamhaeng University students in two programs (one minute sit-ups and trunk forward flexion) revealed a statistically significant result at .05. Therefore, researcher applied a paired Scheffe test to adjust the significance levels in Table 6 and 7.

**Table 6:** The comparison of a paired Scheffe test of physical capacity test score of the experimental group who study bachelor degree at Ramkhamhaeng University students before and after four-week and eight-week training in one minute sit-ups.

	Before training	After 4-week training	After 8-week training
Before training	-	-	*
After 4-week training	-	-	-
After 8-week training	-	-	-

\*p < .05

From table 6 can be explained that the comparison of a paired Scheffe test of physical capacity test score of the experimental group who study bachelor degree at Ramkhamhaeng University students before and after eight-week training in one minute sit-ups revealed a statistically significant result at .05.

**Table 7** The comparison of a paired Scheffe test of physical capacity test score of the experimental group who study bachelor degree at Ramkhamhaeng University students before and after four-week and eight-week training in trunk forward flexion.

	Before training	After 4-week training	After 8-week training
Before training	-	*	*
After 4-week training	-	-	-
After 8-week training	-	-	-

\*p < .05

From table 7 can be explained that the comparison of a paired Scheffe test of physical capacity test score of the experimental group who study bachelor degree at Ramkhamhaeng University students before and after four-week training and also before and after eight-week training in trunk forward flexion revealed a statistically significant result at .05.

## Discussion on Research Results

1. The comparison of physical capacity test score results of the experimental and controlled group before and after four-week training did not reveal a statistically significant result in all four programs. While the result of physical capacity test score of the experimental and controlled group before and after eight-week training revealed a statistically significant result at .05 in trunk forward flexion, but showed no statistically significant result of the other three programs. According to Onarnong Duangchuay (2008, abstract) studied the result of basic Muay Thai towards physical capacity of elementary level students at Kaenthong Upatham School, Pavej, Bangkok. The result of physical capacity test score of the experimental and controlled group before and after four-week training revealed no statistically significant result of all five programs. While the result of physical capacity test score of both groups before and after eight-week training revealed a statistically significant result at .05 in trunk forward flexion only. All of these results have showed that basic Muay Thai training in educational institutes has the positive effect towards the physical capacity according to the better result after training. This is because basic Muay Thai training is suitable, safe, and fun way to have a good physical health.

2. One-way analysis of variance (ANOVA) result of physical capacity test score of the controlled group before and after four-week and eight-week of training showed no significant level at .05. While the experimental group revealed a statistically significant result at .05 in two programs. First, one minute sit-ups showed difference before and after eight-week training. Second, trunk forward flexion found difference before and after four-week training and also before and after eight-week training. From the research result showed that basic Muay Thai training affected the development in physical capacity for health in one

program (trunk forward flexion), but showed no effect in the other three programs. It can be concluded that basic Muay Thai training can promote the physical capacity in flexibility which is one of the most important factor in developing health related physical fitness. Chanchai Choptamsakul (41, 2009) stated about the flexibility as the ability of body movement e.g. arms, legs, and trunk especially the joints at full range of motion. Therefore, basic Muay Thai training; which composes of fists, feet, knees and elbows, is a form of body movement in muscle, joints, ligaments can affect physical capacity in flexibility. The benefits of flexibility can help you prevent or lessen injury in routine activities.

The result of one minute sit-ups revealed the difference before and after eight-week training in the experimental group, but not in the controlled group. In researcher's point of view agreed with the FITT principle of training which outlines the key components of Frequency, Intensity, Time and Type integrated with basic Muay Thai training. Frequency and time formula should be considered to find the difference between the experimental group and the controlled group in other programs. Charoen Kabuanrat (5, 2014), coach or trainer should remember the general guidelines of FITT principle for what should be included in a fitness plan. It's important to keep in mind that each person's goals will be different based on health, routine, current fitness level and satisfaction on health and capacity in every aspects.

## **Recommendations**

1. Basic Muay Thai training should be promoted and applied in exercise for physical capacity for university students' health in higher education both in government and private institutes.
2. Basic Muay Thai training should be promoted and applied in exercise for physical capacity for health in overall offices in higher education both in government and private institutes including with citizen's sector.
3. Physical Capacity test should be generally taken by Ramkhamhaeng University students so that the test result would be adapted to promote physical capacity of the students.

## **Recommendations for Future Research**

1. Physical capacity of other universities students or other educational institutes e.g. PE Institutes and Rajabhat Universities should also be studied.
2. Other training programs which could promote physical capacity for health e.g. nine-scale exercising should also be studied.
3. Basic Muay Thai which could promote physical capacity for health should be applied with students in basic educational curriculum.

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# **The Effects of Institutional and Student Engagement on the Student Learning Outcomes: Evidence from Taiwanese Private University**

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## **Abstract**

Higher education plays a key role in national economic development. According to statistics from the Ministry of Education (MOE), there were 166 higher education institutions (HEIs) in Taiwan in 2014. This form of mass education provides more educational opportunities for students, but also raises problems like low teaching quality and competitiveness. Using multilevel models, this study examined whether the strength of the association between student engagement and development of student learning outcome based on data from 1,226 students. This study examined how learning and institutional scales contribute to the narrative on academic rigor at a medium, private teaching institution. The results indicate that a specific type of engagement is linked to a particular learning outcome, which means that not every engagement type has an equal impact thereon. The findings also suggest that in Taiwan, raised questions regarding good measurement of student learning and student reward for rigorous performance.

**Keywords:** Institutional Research, Institutional Engagement, Student Engagement, Student Learning Outcome

## **Introduction**

Amid the knowledge-based economy, the core value and study pattern of establishing competitive advantages for students have already changed. Knowledge has become the dispensable components of developing students' key skills and core capabilities, while such higher education topics as the learning outcomes and research on educational administration have also drawn much attention from universities and colleges. Previous literatures indicate that concentration and study pattern serve as the driving forces of stimulating and creating students' core abilities with the positive influences on study efficiency; however, educational administration advocates that the efficient study resources and environment from the executives, which are conducive to the improvement of study efficiency, are the sources of valuable assets and competitive advantages for students to grow up. The perspective of institutional engagement differs from the student engagement on examining students' knowledge learning and ability cultivation, so it should be attached great importance and we should establish efficient study activities and approaches through sound transforming systems as so to improve study abilities and learning outcomes.

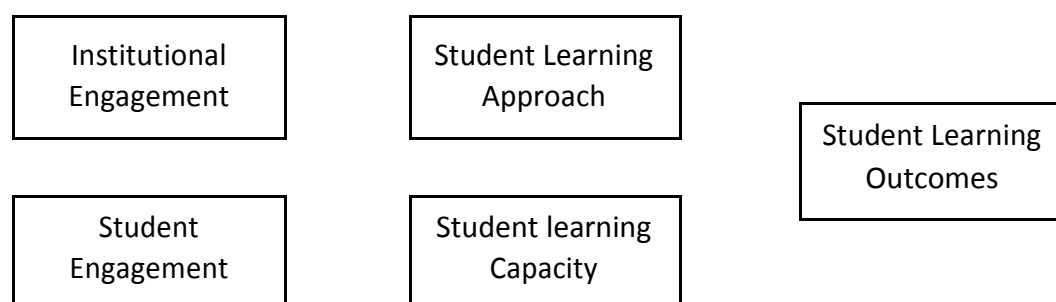
HEIs in Taiwan can be divided into two kinds, i.e. state-run and private institutions. In the case of rich subsidies and sound study situation, the qualities of students in state-run universities are better than that of students in private universities, and the condition of study and economy for most of students in private universities are still poorer than those in state-runs'. Thus, with several unfavorable influences, the exploration of study input and learning outcomes of students in private universities is an interesting topic under the research situation of private universities in Taiwan.

Researchers on learning believe that students can carry out study driven by learning stimulus, so as to acquire the ability of developing new knowledge and further improve the learning outcomes. Most of the definitions concerning student learning are discussed from the learning process or/and outcomes, and those researchers propose that students can effectively deal with courses knowledge in the learning process, which can not only be conducive to adsorbing knowledge for students but also improve the learning ability and outcomes through self-learning. There are a lot of scholars do research on the way that students improve learning input to acquire knowledge through learning activities and creating learning stimulus with student learning theory, and help students, under the uncertain and competitive knowledge-based economy, to gain the favorable position in the future job market by continuous learning, improvement, accommodation and lifting the ability to address the changes in environment. The conclusion is that there should be certain connections towards learning input with ability and approaches, and when putting it into the discussion of connections between institutional engagement and learning outcomes within educational administration, it is necessary to include the influence of learning input to outcomes through learning approaches and abilities with a more comprehensive model.

With references to the previous researches, this paper divides the learning process into learning approaches and ability, which both are the ways and abilities applied in the learning process, and finally introduce the measurable learning outcomes that can change with the fluctuation of input and be more dynamic compared with learning approaches and ability. There are lots of literatures supporting that students can transform accumulated knowledge through learning process and improve learning ability, so the contribution of various learning approaches towards learning abilities should not be ignored. But with the limited resources and time, it is difficult for students to simultaneously attach the same significance to all learning approaches, and make the same efforts, so it is of necessity to clarify the appropriate and more important learning approaches, inject more time and efforts into them and focus on strengthening administration so as to effectively improve the learning ability. Therefore, in the context of research on the educational administration, how to enhance learning approaches and abilities from the perspectives of institutional engagement and student engagement has become the important topic to help the weak students to gain the efficient learning outcomes. This study aims to explore the relationship among institutional engagement, student engagement, learning approaches, leaning ability and learning outcomes, taking the students from domestic private universities as the samples, and further do research on the influence of learning approaches towards student's learning abilities.

This paper has made contribution to research in two ways. First, on the basis of proven information and documents, it explores the influence of institutional engagement and student engagement towards the learning outcomes for weak students through learning approaches and abilities, and proves that the intermediary results of learning approaches and abilities differ from the influence of administration on learning outcomes narrated in a concept way by most of previous literatures. Second, the previous literature emphasizes that student learning should be divided into process (learning approaches) and result (learning ability), so in response to

this theory, it further specifies student learning into leaning approaches and ability so as to explore the relationship between learning approaches and important administration and student engagements. The framework of this study is as follows:



**Figure 1:** Research framework

## Literature Review

### **Institutional and Student Engagement**

In the past decades, scholars has established newer and richer understanding and narrations in the study of learning science on the basis of numerous known knowledges, especially through the research on the observation of others' behaviors, scholars began to try a needed knowledge base of developing and completing a certain task(Oleson & Hora, 2014). Those knowledge learning activities can be carried out by influences of supervisor and immediate relatives, knowledge of learning approaches and theme, and practical knowledge acquired from the class (Pike et al., 2012). What is more important is that those learning approaches and beliefs have already rooted in the mind of students before they are taught by teachers in the class. In the primary stage, students just like apprentices observe teachers' behaviors, and they never do a systematic study and imitation, instead they would provide a set of acceptable behavior scripts through the memory of the plots. Therefore, the fundamental purpose of developing student's learning is to improve student engagement to the learning activity applying all learning potential, not the traditional teaching approaches. Student engagement can be regarded as the quality of learning experience, so the quantity of physiological and psychological energy in the learning depends on the role that student play in the learning but not the passive body influenced by the environment. As far as psychology is concerned, learning input includes energy, involvement, professional efficacy and another important component that is absorption (Schaufeli et al., 2002); Specifically speaking, according to the definition of Schaufeli and Salanova (2007), students can complete the learning task with high-level energy and mental resilience, as well as the willing and persistence of input effort, even in the tough context; they would intensively carry out leaning, and realize its contributions such as significance, enthusiasm, inspiration and challenge; and completely concentrate on his own learning task in a pleasant way.

### **Student learning Approach**

The study indicates that the learning approaches can be influenced by teachers, families, attribute of subject topic and the acquisition of practical knowledge in the class (Pike, Smart, & Ethington, 2012) . What is more important is that those learning approaches and beliefs have already rooted in the mind of students before they are taught by teachers in the class. Therefore, the purpose of stimulating students to learn is to improve the participation level in learning activities, so as to help them to release potential abilities but not being taught by traditional teaching method; so in the process of enlightening students to learn, teachers should

transform the existing teaching method of teacher's guidance and passive learning into the student-core and active learning, so as to guide students to explore the in-depth knowledge connotation and apply the acquired knowledge to the different conditions (Lave & Wenger, 1991; Tagg, 2003). In the past, scholars have proposed different narrations and descriptions in accordance with the connotation and classification of students' approaches to learning (Marton & Säljö, 1976; Duff et al., 2004). The learning approaches can create the high-quality university teaching practices (Biggs & Tang, 2011; Ramsden, 2003; Tagg, 2003), which are developed by the collaboration among students, colleges, universities and teachers, so as to nurture in-depth and concrete teaching models, including stimulating positive student's response, establishing background knowledge and impart the broader interlink among different ideas. Scholars agree that effective learning approaches and strategies are certain commitments of understanding textbooks and information from the student personally, which reflect the application of different learning strategies, such as extensive reading, integration of resources, collaborated discussion of ideas, devotion to connecting single piece of information with broad concepts and models, and application of knowledge in the real world (Biggs, 2003; Ramsden, 2003; Tagg, 2003).

### **Student core capability**

Therefore, the approach of learning input means the establishment of generic student competencies (GSCs), such as problem-solving, communication, and interpersonal, which play an important role in the learning process. In the higher education, the core ability differs from the soft and hard strengths with multilevel, and in the study of exploring leaning ability and basic ability, it is difficult to find the concrete nature and prominent differences of job-hunting power because of the different classification standards. Based on this, Hennemann and Liefner (2010) concluded a comprehensive frame of influence factors towards the cultivation of job-hunting power for graduates in the universities, so as to explain the important role that capacity and capability play in this process. Hennemann and Liefner (2010) made the distinction among capacity, capability and competence, and defined capacity as the appropriate confidence that person deal with matters in the uncertain environment and could continuously learn something from experiences; capability has the nature of future-orientation, so it can be regarded as the basic results in the interactive learning; competence means the learner possesses the adequate confidence to demonstrate capability in the broad and diverse context and continuously improve the application of capability (Brown & McCartney, 2004; Hart, Bowden, & Watters, 1999; Hennemann & Liefner, 2010). Nygaard et al. believe that in university education, student learning should include knowledge, skills and competence, of which competence contains personal quality and social background (Kellermann, 2007) and applies knowledge and skills through reflection.

### **Student learning outcome**

Learning outcomes serve as an indicator to evaluate the students' learning results. The purpose of measuring learning outcomes is to help students to get understanding of his own learning conditions and make them the evidence for teachers and students to improve teaching quality and learning efficacy (Guay, Ratelle, & Chanal, 2008). The study indicates that learning is a process of creating and evolving behavior driven by activities and experiences; so students can recognize the influence of learning communication by class participation and interaction with teachers and peers, and his performance under certain measurement indicator after learning (Pike et al., 2011; Pike, Smart, & Ethington, 2012). Although scholars take the same measurement method towards learning outcomes, Pike, Smart, Kuh, & Hayek (2006) remind that most of previous studies examine the learning performance in the different time points, such as freshman, sophomore, junior and senior students, and the single analysis of these

students may cause errors to study result, that is there are differences of learning outcomes from different grades because of relationship among variables. Therefore, in order to satisfy this topic, this study will control the grade of the testees to reduce the difference of variables among samples. This study, referring to the result from Campbell and Cabrera (2014), takes students' scores as the variables to measure learning outcomes and explores the influence of learning approaches and capabilities towards academic records.

## Mythology

### Sampling

To measure the large-scale data on the effectiveness of learning about private school college students input, learning methods, learning ability, this study collected the samples of a private university students in Taiwan and integrated data from the school library for analysis. This study selected 2014 Students' Research Database Questionnaire from a private school in Taiwan to be Object of study, the search database quarter 1203 recorded document data, after deduction of incomplete information, retain valid samples units 1003.

### Measurement

#### Institutional engagement

This study takes the factor score that includes 21 questions such as "the performance of learning mainly depend on the learning environment", "the performance of learning mainly depend on the teaching methods" in the data bank, with "strongly disagree", "disagree", "normal", "agree", and "strongly agree" by Likert five degrees, encoding 1, 2, 3, 4, 5, in which the higher total score means the higher level of institutional engagement. We take varimax of orthogonal rotation to extract factors by method of principal axis, so as to extract three factors from analysis results of the exploratory elements, the variables of explaining can reach 57.27%, and the load capacity of various factors is between 0.48-0.83, and the whole Cronbach's  $\alpha$  value is 0.87. The names of variables are determined in accordance with 4 factors, which are "learning environment", "learning support", "soft and hard equipment demand" and "interaction between teachers and students", so we will further analyze these four dimensions. The second order CFA shows GFI=0.98, AGFI=0.99 and RMSEA=0.02, and other indicators such as NFI, CFI, RFI and IFI are 0.96, 0.98, 0.92, and 0.98 respectively.

#### Student engagement

This study takes the factor score that "I am concentrated on the learning activities in the class (such as practicing operation, discussion, etc.)", which includes 4 questions of "role identity", 4 of "learning identity", and 2 of "goal-oriented learning", and 3 of "career planning". Extracting three factors from analysis results of the exploratory elements, the variables of explaining can reach 65.71%, and the load capacity of various factors is between 0.46-0.76, and the whole Cronbach's  $\alpha$  value is 0.86. The second order CFA shows GFI=0.98, AGFI=0.99 and RMSEA=0.04, and other indicators such as NFI, CFI, RFI and IFI are 0.92.

#### Student's learning approaches

This study takes the factor score that "I often have access to the information concerning my future development", which belongs to the attitude towards university in the questionnaire, and they are divided into 5 questions of "self-reflection learning", 5 of "problem-oriented learning", and 3 of "active learning". Extracting three factors from analysis results of the exploratory elements, the variables of explaining can reach 51.32%, and the load capacity of various factors is between 0.45-0.80, and the whole Cronbach's  $\alpha$  value is 0.78. The second

order CFA shows GFI=0.98, AGFI=0.99 and RMSEA=0.04, and other indicators such as NFI, CFI, RFI and IFI are 0.92.

#### Student learning capacity

Student's learning capacity includes the factor score that "the performance of student's learning mainly depends on his own devotion" with 4 question items. Extracting three factors from analysis results of the exploratory elements, the variables of explaining can reach 49.77%, and the load capacity of various factors is between 0.54-0.80, and the whole Cronbach's  $\alpha$  value is 0.66. The second order CFA shows GFI=0.98, AGFI=0.99 and RMSEA=0.04, and other indicators such as NFI, CFI, RFI and IFI are 0.92.

#### Student learning outcomes

This study, using the result of Campbell and Cabrera (2014), shows that the learning outcomes mainly depend on the scores of student in campus, so it takes the score as the symbol of his learning outcomes, and explores the influence of learning approach and competence toward his scores in the university.

## Analysis results

### Reliability and viability

This study develops a parameters model frame of job-hunting power for students after the above literatures and testing of validity and reliability, and then makes use of LISREL to study the efficiency of actual measure model and comprehensive appropriate degree of evaluation study model, and examine the assumption proposed by this study. We can use Maximum Likelihood to estimate the model.

**Table 1:** Descriptive analysis

Variables	Mean	SD
Institutional engagement		
Learning environment (LE)	3.45	0.80
Learning support (LS)	3.40	0.66
Soft and hard equipment demand (SHED)	3.32	0.74
Interaction between teachers and students (ITS)	3.42	0.77
Student engagement		
Role identity (RI)	3.64	0.76
Learning identity (LI)	3.65	0.73
Goal-oriented learning (GOL)	3.42	0.85
Career planning (CP)	3.73	0.83
Student learning approach		
Self-reflection learning (SRL)	3.34	0.66
Problem-oriented learning (POL)	3.17	0.81
Active learning (AL)	2.98	0.81
Student learning capacity (SLC)	3.67	0.76
Student learning outcomes (SLO)	74.69	13.51

Before the evaluation and testifying of the fit measure for theory assumption model, we should carry out correlation test among various indicators as shown in Table 2, and its result indicates that the all correlation coefficients is above the .05 prominent level, that means there is certain correlation among 13 indicators and absolute values among them are not close to 1.

**Table 2:** Measurement

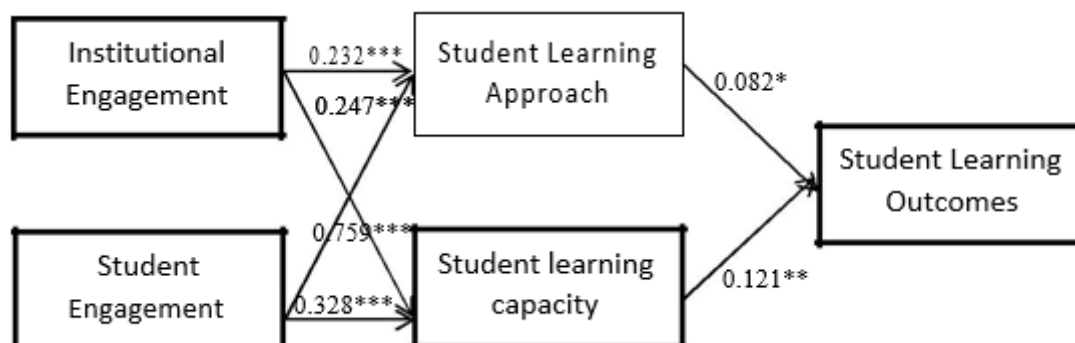
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. LE	1	.269**	.179**	.223**	.314**	.277**	.198**	.425**	.268**	.316**	.179**	.532**	.100**
2. LS	.269**	1	.664**	.524**	.533**	.436**	.400**	.357**	.502**	.343**	.325**	.420**	.138**
3. SHED	.179**	.664**	1	.414**	.419**	.341**	.353**	.238**	.409**	.290**	.264**	.291**	.134**
4. ITS	.223**	.524**	.414**	1	.460**	.334**	.379**	.265**	.454**	.247**	.442**	.302**	.087**
5. RI	.314**	.533**	.419**	.460**	1	.534**	.471**	.451**	.509**	.386**	.379**	.417**	.248**
6. LI	.277**	.436**	.341**	.334**	.534**	1	.531**	.434**	.554**	.281**	.277**	.405**	.090**
7. GOL	.198**	.400**	.353**	.379**	.471**	.531**	1	.421**	.654**	.259**	.302**	.268**	.065*
8. CP	.425**	.357**	.238**	.265**	.451**	.434**	.421**	1	.429**	.296**	.240**	.546**	.170**
9. SRL	.268**	.502**	.409**	.454**	.509**	.554**	.654**	.429**	1	.368**	.394**	.339**	.037
10. POL	.316**	.343**	.290**	.247**	.386**	.281**	.259**	.296**	.368**	1	.255**	.361**	.150**
11. AL	.179**	.325**	.264**	.442**	.379**	.277**	.302**	.240**	.394**	.255**	1	.222**	.079*
12. SLC	.532**	.420**	.291**	.302**	.417**	.405**	.268**	.546**	.339**	.361**	.222**	1	.165**
13. SLO	.100**	.138**	.134**	.087**	.248**	.090**	.065*	.170**	.037	.150**	.079*	.165**	1

The fit measure of comprehensive model serves to evaluate the fit degree of the whole model and observation information, so as to examine the outside quality of this model. According to scholars (Qureshi & Compeau, 2009), comprehensive fit measure evaluation includes absolute, value-added and concise fit measures. In the absolute fit measure, RMSEA=.043, belonging to a good fit measure standard of less than .05, and at the same time, GFI=.972 and AGFI=.954, which are over .90. So we can conclude that the fit measure degree among this theory model and collected sample documents is pretty sound. In the value-added fit measure, NFI=.961, CFI=.974, IFI=.974 and RFI=.942, which are above .90. And in the concise fit measure, PNFI=.646 and PGFI=.579, which are above .50, and AIC=338.746 is less 5858.59 than independent model, so this conclusion meet the standard that AIC of theory model must less than that of independent model, demonstrating the simplifying variables of this model can effectively reflect the relationship among various variables. As above shows, the fit measure of this study model and comprehensive model of observation information reach the ideal standard and serve as the concise model.

### SEM analysis results

The result of analyzing above multi variables just shows the difference of study dimensions from the Demographic variables but does not reveal the influence relation of what kind of study dimension under the comprehensive model. If the relationship between input and approach, and capacity and outcomes can be obtained, it will contribute to help universities and teachers to improve course design and teaching method, so as to enhance the students' learning performance. This study use SEM to make an analysis with effective 1003 students samples, apart from improving the stability and fit measure of this model, it also adds the generalized degree of this study. As the fig.2 shows, the conclusion from the SEM path indicates that the coefficient of standardization of institutional engagement towards learning approaches and competence reaches statistic prominence ( $\beta=.232$ ,  $p<.001$ ;  $\beta=.247$ ,  $p<.001$ ),

and that of student engagement also reaches that level ( $\beta = .759, p < .001$ ;  $\beta = .328, p < .001$ ). In addition, the coefficient of standardization of learning approaches ( $\beta = .082, p < .05$ ) and competence ( $\beta = .121, p < .01$ ) towards learning outcomes also reaches statistic prominence. So we can conclude that the improvement of learning approaches and competence are conducive to the promotion of learning outcomes.



**Figure 2:** Path analysis

## Conclusions

### Research findings

This study is based on a study sample of a private university in Taiwan, using the mode of input-enhancement-output to test the relevance of school investment, students investment, learning approaches, learning ability and learning effectiveness, integrate the variables available from the data of database, then put forward practical recommendations on student learning through validation studies architecture. Based on the results, these following studies have found.

Under the validation sample of private college students, the results about the path relationship of the study model showed that school investment has positive significant effects in learning approaches and learning ability, and that when school increase students' devotions in learning resources will enable students' understandings and recognitions of the role and obligations of being a student. It will help to increase participation in the learning activities, thereby enhancing its ability to learn later.

Furthermore, the extent of the student's own input, can also improve learning approaches and learning ability, the results match with the concept of achievement motive proposed by Chen etc. And that is the expectations and social values within the group members will have different impacts on students' construction of achievement goals, and further derive important meanings and results to their learning investment. In other words, due to students' family background, they suffered a higher degree of social expectations from parents or family and roles of obligations, it is easy to be aware of their own role and have more strong feelings to participate in various learning activities and put inputs. In addition, the path coefficients showed that the improvements of students' devotion in learning approaches and learning ability are greater than the investment in school, meaning that apart from the school investment in resources from to improve students' learning environment and learning resources, the encouragement of students' psychological plane should also be taken seriously. Same as Petersen and the others' research, stressed important personal internal factors like students use self-determination to guide motivation or self-esteem and perceived stress, will help them to

engage in academic learning and other related acts, the conclusion can also be considered as substitution within the University of extrinsic reward in the motivational factors reorientation.

Furthermore, this study want to discuss the relationship between students' learning approaches, inter-learning ability and learning effectiveness, and understanding in the use of learning approaches, what ways can help to improve learning outcomes of the undergraduates. The description will be divided into two parts according to variables: First, reflections of learning, learning problem solving, active learning all have a positive impact on learning outcomes. It means that during the process of knowledge acquiring, three learning styles played an important role along with a kind of feedback control mechanism, constantly correcting errors in the process, and through conscious or unconscious learning to update the student's individual memory, promote the use of reflections of learning, learning problem solving and active learning, so that students can enhance their learning effects through many skills like the understanding of professional knowledge, theory deduction, principle study of students, the concept of time or stress management. Second, the learning part, college students are all able to continually participate in learning activities, in addition to absorb new knowledge, at the establishment of affective development, moral education and values, teachers are not only have the responsibilities to teach students academic knowledge, but also teach positive attitudes, social application of soft power and the development of moral qualities when they facing interaction of extracurricular things and people, thereby improving the effectiveness of their learning.

### **Implications**

This study investigates College Students learning process through school investment and students investment in the resources level, although motivation is an important factor in learning, to enhance students' self-identity and self-efficacy also is a direction that school should strive further, but these two psychological factors were only the sufficient condition to motivate students, not the necessary condition. It recommends that universities can use external assistance and economic support as a basis, that is to say a variety of learning-induced psychological motive can be established in various economic conditions support; If school can provide a stable school campus work-study internship opportunities or promote school environment, such as internships shops, administrative work-study, so that students can earn in addition to cost of living, but they can also be left in school, studying subjects related practices or participate in service learning experience, so that they feel the fun of learning applications and professional knowledge and ability, and also prevent the problems of ignorance their studies and follow-up investment or other learning problems due to workplace safety or overtime work.

### **Research limitations and future research direction**

Except for increase the familiar of knowledge, teachers can recommend to strengthen students' ability to use cost-effective ways to solve problems, to reduce the possibility of error problem solving, the risk of assessment the decision, and this should guide students to have better learning. For example, a university to promote volunteering and internship trainee program is the key to let student learning outcomes into the rising orbit, the learning activities of students during the school may help to enhance the professional knowledge and ability, but with the learning environment inside the school campus is more stable than the outside, its perception of attitudes, values and interpersonal failure to have a clear growth. Therefore, this study suggested that schools through service-learning industry internship or external socialization process, will help students understand their responsibility and social adaptability from learning experience or problem solving.

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# **The Effect of Multimodal Texts on EFL Students**

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## **Abstract**

The purpose of this study was to investigate the effect of multimodal texts on EFL students' reading comprehension skills. The samples of this study were fifty tenth-grade students studying English as a foreign language in Thailand. They were divided into two groups: an experimental group and a control group. The research instruments in this study included a reading comprehension test and lesson plans to teach reading by using multimodal texts. Mean scores, standard deviations, and t-test analyses were used to analyze the data. The results indicated that teaching reading by using multimodal texts had a positive effect on students' reading comprehension skills.

**Keywords:** Multimodal Texts, EFL Students, Teaching Reading, Reading Comprehension Skills

## **Introduction**

Nowadays, reading becomes an essential skill to be successful in learning. Reading is a life skill that enables students to extend their knowledge and gain information. Because of knowledge sources are increasingly written in English language, Thai students are required to be familiar with the English reading. In Thailand, reading comprehension skills are significant for Thai students to complete their studies. As students move beyond the primary grade, they are expected to have reading skills in order to understand more difficult materials for acquiring and getting information. They are required to read various kinds of texts, such as newspapers, magazines, advertisements, and poetry. In addition, the Ministry of Education (2002) requires students to have ability of understanding and interpreting what they read. Therefore, Thai students need to have reading ability in order to complete their studies.

However, many studies proved that most Thai students had poor English reading comprehension skills. For example, Sutta (1994) examined the graduate students' reading comprehension ability in reading expository texts in six different skills: (a) main idea, (b) details, (c) sequence, (d) compare-contrast, (e) cause-effect, and (f) drawing conclusion and predicting outcomes. The study showed that the graduate students' reading comprehension skills in reading expository texts were not proficient. Similarly, Chawwang (2008) studied the reading problems of 12th-grade students in educational region 1, 2, 3, and 7 in Nakhonratchasima. The results of the study claimed that the students in this area had problems in three areas of reading: (a) sentence structure, (b) vocabulary, and (c) reading comprehension. In addition, a recent study conducted by Prom-D (2012) found that seventh grade students' reading ability to get the main idea, to find the details, to make inference, and to differentiate between fact and opinion was low. Since Thai students lack English reading comprehension skills, it is significant that Thai instructors should rethink about their method of teaching.

In order to support the reading comprehension skills of Thai students, the use of multimodal texts in teaching reading can be one choice for instructors. Walsh (2006) and

Groenke and Prickett (2012) define multimodal texts as a combination of two or more modes of communication such as print, image, and audio, so the meaning is communicated through the combination of modes. Multimodal texts can be both print and digital forms, for example images, flashcards, picture books, audio books, newspapers, magazines, videos, animation movements, and PowerPoints presentations. When two or more modes are presented, one can better understand the information. Therefore, using multimodal texts in teaching reading can promote students' reading comprehension skills because it presents various modes at once which enable students to choose the available modes for them to comprehend the texts. Accordingly, many educators claimed that using multimodal texts in teaching is advantage in learning. For example, the studies of Wash (2006) found that using multimodal texts in classroom was an effective way in promoting students' engagement. When students were presented with multimodal texts, they were more motivated and engaged in classroom activity. With the advantage of multimodal texts discussed, teaching reading by using multimodal texts might be a good choice for EFL instructors. Therefore, this study was to examine the effect of multimodal texts on reading comprehension skills of 10th-grade students in Chachoengsao province, Thailand.

## **The Concepts of Multimodal Texts**

Multimodal texts have been defined by many researchers and educators. According to Groenke and Prickett (2012) multimodal texts are texts which contain multiple modes of presentation. The texts combined elements of print, visual images, and design. Furthermore, Kress and Van Leeuwen (1996) propose that multimodal texts are written texts, visual images, graphic elements, hyperlinks, video clips, audio clips, and other modes of presentation (as cited in Serafini, 2012, p.28). It is defined as the combination of words, symbols, pictures, movements, graphs and sound which are presented through the digital technology. In addition, Walsh (2006) states that "multimodal texts are those texts that have more than one „mode“ so that the meaning is communicated through a synchronization of modes" (p.1). In conclusion, multimodal texts refer to a combination of two or more modes of presentation such as print, image, and audio, so the meaning is communicated through the combination of modes.

Educators reveal that using multimodal texts in teaching has positive effects on students' learning in two ways. First, they are effective to promote students' engagement. Loerts (2010) states when students are presented with multimodal learning environment, they take more responsibility for their own learning. This is because the presentation of multimodal texts makes them become agents in meaning making process (as cited in Vining, 2014). As such, students are more motivated and engaged in classroom activities. This is supported by the study of Wash (2006) which examined how primary and secondary school students interacted with multimodal texts in literacy learning. The finding revealed that when students were engaged in multimodal texts environment, they were clearly engaged in learning. Second, using multimodal texts in classroom supports differentiated classroom. Because students learn through different sensory (auditory, visual, kinesthetic), teachers can integrate multimodal texts in their lessons in order to support the needs of all learners (Tomlinson, 2014). When multimodal texts are presented, students adapt their learning styles in order to learn and to gain information in their memory. Teaching and learning in multimodal environment allow students the opportunity to find the information that they find most effective for their learning (Hanna, David, & Francisco, 2010).

There are some studies on using multimodal text on classroom. For example, the study of Rigas and Ayad (2010) investigated students' satisfaction and enjoyment through the use of

multi-modal “edutainment” game in e-learning environment. The results showed that all users enjoyed all conditions of multimodal game in learning. In addition, Jacobs (2013) examined how the use of multimodal texts could support college freshmen learning as an academic writer and thinker. The author claimed that students gained a better understanding of how academic arguments were constructed when they were taught using multimodal environment along with traditional instruction. Yongjin (2013) examined the effects of different modalities and its combination to improve teaching listening. The result indicated that when the choices of different modalities were combined appropriately, it could promote students’ listening ability. With the advantages of multimodal texts discussed above, teaching reading by using multimodal texts might be a good choice for EFL instructors.

## Teaching Reading

According to Graves and Graves (2004), the method of teaching reading should be divided into three stages; pre-reading, during-reading, and post-reading. (See Table 1)

**Table 1:** Teaching Reading Framework

Stage	Objectives	Activities
Pre-reading	<ul style="list-style-type: none"> <li>- Motivate and setting purposes</li> <li>- Activate background knowledge</li> <li>- Relate the reading to students’ lives</li> </ul>	<ul style="list-style-type: none"> <li>- Providing illustration</li> <li>- Showing video</li> </ul>
During-reading	<ul style="list-style-type: none"> <li>- Facilitate students’ understanding and enjoyment while they are reading</li> </ul>	<ul style="list-style-type: none"> <li>- Posing question</li> <li>- Reading on for answers</li> <li>- Reading along the texts</li> </ul>
Post-reading	<ul style="list-style-type: none"> <li>- Encourage students to do something with the texts they have read and to make them think logically, critically, and creatively</li> </ul>	<ul style="list-style-type: none"> <li>- Speaking</li> <li>- Writing</li> <li>- Creative art</li> </ul>

Pre-reading stage aims to activate background knowledge and predict the story before reading. Since background knowledge influences the students’ comprehension, it is important that the instructor provides enough information to make students understand concepts in the texts. For example, the instructor encourages students to talk about what they already know about the subject, or provides illustrations, or show a video about the subject. Next, the instructor asks students to predict what will happen in the story to get students’ involvement with the text.

During-reading stage includes activities that facilitate students’ understanding and enjoyment while they are reading. Examples of during-reading activities are posing question and reading on for answers, figuring out word meaning using context clues, retelling a paragraph, reading along the texts while listening to the audio, completing charts, and making a mental images.

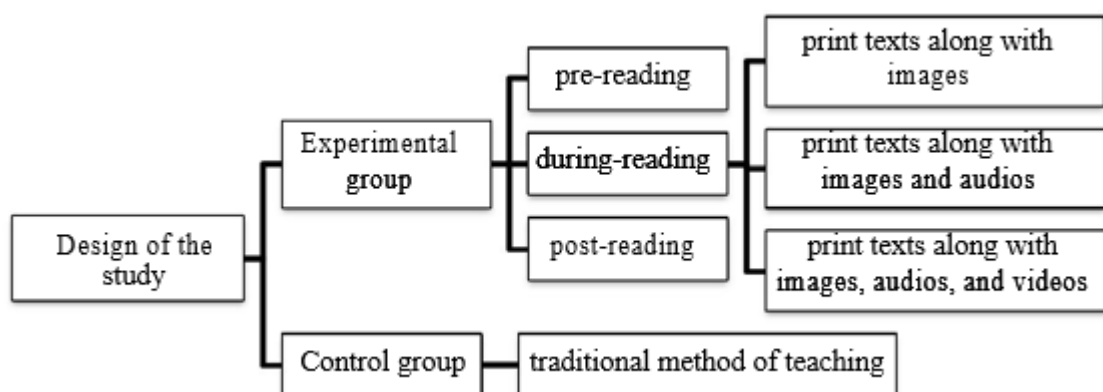
Post-reading aims to encourage students to do something with the texts they have read and to make them think logically, critically, and creatively. Its purpose is to get students’ idea from the reading, encourage students to respond to what they have read, and transform the students’ thinking into action.

The post-reading activities can take in various forms, for example, speaking, writing, plays, or creative arts. These activities help students see how the texts relate to their own lives and help them to remember what they have read.

## Teaching Reading by Using Multimodal Texts

In classroom, the instructor who employs multimodal texts uses variety of modes of presentation. Some examples of employing multimodal texts include using picture books, still and moving images, and video presentation. In these examples, an online instructor Laurie Lorence (Kelly, 2010) suggests how to apply multimodal texts into a classroom. First, the instructors should change the learning modes in every 15 or 20 minutes to involve students in learning. Second, repeat the same lesson by using two or three different modes. Third, create supplementary activities if necessary, as some students do not understand the lesson immediately.

In this study, teaching reading framework proposed by Graves and Graves (2004) and Laurie Lorence's suggestions (Kelly, 2010) are employed as a framework to design lesson plans to teach reading by using multimodal texts. The teaching process in this study was divided into three phases: pre-reading, during-reading and post-reading. In the pre-reading phrase, students were motivated to activate their background knowledge about the topic of teaching. Then, in the during-reading phase, the students were taught reading using three different modes of learning: (1) print texts along with pictures, (2) prints texts along with pictures and audios, and (3) print texts along with pictures, audios, and videos. In the post-reading phrase, students were asked to do activities related to texts they read such as speaking, writing, and creative arts. Figure 1 shows the process of the teaching reading by using multimodal texts in this study.



**Figure 1:** The process of the teaching reading by using multimodal texts in this study

## Methodology

### Participants

The sample of the study comprised of 50 students studying EN31102 in the second semester of 2015 academic year at Bangnamprieowittya school, Chachoengsao province, Thailand. The participants were selected using convenient random sampling. They were divided into experimental and control group with twenty-five students in each group.

Before the experiment, to compare the reading abilities of participants in the experimental group to that of the control group, students in both groups were asked to do the

pretest. Mean scores, standard deviations, and the t-test analysis were used to analyze the data from the pretest. The results were presented in Table 2.

**Table 2:** Comparison of the reading ability scores of the experimental group to those of the control group

Time	Group	N	Mean	S.D.	T
Before the experiment	Experimental	25	9.56	2.18	.21
	Control	25	9.44	1.78	

\*<.001

Table 2 reveals that the mean score of the students in the experimental group were not significantly different from those of the control group. The mean score of the students in the experimental group was 9.56, and that of the control group was 9.44. This suggest that all of students in the study had reading abilities at the same level.

### **Instruments**

The research instruments used for collecting data in this study consisted of an English reading comprehension test and lesson plans to teach reading by using multimodal texts. Lesson plans were created to teaching reading by using multimodal texts. The method of teaching was divided into three phases. In the first phrase, pre-reading, the instructor asked some questions to motivate, set purposes for reading, and activated students' background knowledge. The instructor also provided pictures or short videos to encourage students to relate the texts to their lives. In the second phrase, during-reading, students were asked to read the text in three different modes of presentation: print texts along with images, print texts along with images and audios, and print texts along with images, audios, and video. The students also asked to complete reading comprehension exercises such as true or false, sentences matching, and filling in the diagram. Then the instructor explained the passages by using PowerPoint slides. In the third phrase, post-reading, students were asked to do post-reading activities such as drawing, writing, making visual representation of information they read. The samples of visual representation are writing diagrams, or creating visual arts materials related to the passage read in class.

An English reading comprehension test was developed to compare the reading comprehension skills of students in the experimental group to that of the control group before and after the experiment. The test consisted of twenty questions to measure students' reading comprehension skills: reading for topic, reading for main idea, reading for details, determining referents of pronouns, and using context clues to guess meaning.

The researcher asked three specialists to review the instruments, which included lesson plans to teach reading by using multimodal texts and the English reading comprehension test in order to determine their validity. To determine the reliability, all research instruments were tested with 30 students who were not the participants in this study.

### **Data Collection Procedure**

Before the experiment, the English reading comprehension test was administered to both groups. Following the pre-test, the researcher taught the experimental group using the lesson plans to teach reading by using multimodal texts. The lesson plans using traditional method of teaching reading were taught to the control group. The traditional method of teaching was teacher-centered and included the use of lectures, and discussions. The teaching materials

used were print texts, and worksheets. After teaching for ten sessions, the post-test was administered to both groups using the same test that served as the pre-test. All students' English reading comprehension answer sheets were then collected and rated by the researcher.

### Data Analysis

The data from the pre-test and posttest were analyzed by comparison of mean scores, standard deviations, and the t-test analysis. The dependent t-test and the independent t-test were employed to measure significant differences between the reading comprehension mean score on the pre-test and the post-test between the experimental and control groups.

## Results

To compare the reading comprehension scores after the instruction of the experimental group to that of the control group, mean scores, standard deviation, and the t-test analysis were used. The results were presented in Table 3, Figure 2, Table 4 and table 5.

**Table 3:** Descriptive Statistic of Reading Comprehension Skills

Group	Before the Experiment		After the Experiment	
	M	SD	M	SD
Experimental	9.56	2.18	15.24	2.17
Control	9.44	1.78	10.60	1.61

Table 3 presented that before the experiment, the mean scores of the experimental group were 9.56, and the mean scores of the control group were 9.44. After the experiment, the mean score of the experimental group were 15.24, and the mean scores of the control group were 10.60.

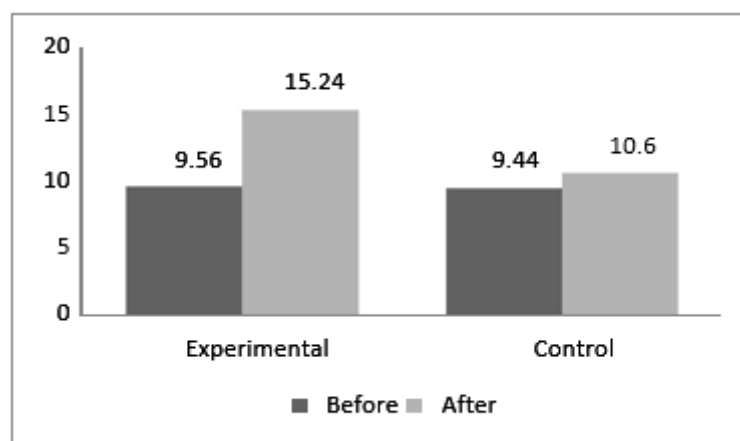
**Table 4:** Comparison of the Mean Scores of the Pretest to the Posttest

Group	Time	N	Mean	S.D.	T
Experimental	After the Experiment	25	15.24	2.17	19.787***
	Before the Experiment	25	9.56	2.18	
Control	After the Experiment	25	10.60	1.61	6.820***
	Before the Experiment	25	9.44	1.78	

\*\*\* < .001

Table 4 showed that the mean scores of the students in both groups were significantly different from the pretest at .001 level. In the experimental group, the pretest mean score was 9.56, and the posttest mean score was 15.24. This means that after the experiment, the reading

comprehension skills were significantly higher than before the experiment. In the control group, the pretest mean score was 9.44, and after the experiment, and the posttest mean score was 10.60. It can be concluded that after the experiment, the reading comprehension skills were significantly higher than before the experiment. It can be interpreted that students in both groups developed their reading comprehension skills after the instruction. The results can be shown in figure 2.



**Figure 2:** The Mean Scores of the Experimental Group and Control Group

**Table 5:** Comparison of the Reading Comprehension Scores of the Experimental Group to the Control Group

Time	Group	N	Mean	S.D.	T
Before the experiment	Experimental	25	9.56	2.18	8.60***
	Control	25	9.44	1.78	
After the experiment	Experimental	25	15.24	2.17	
	Control	25	10.60	1.61	

\*\*\* < .001

Table 5 revealed the effectiveness of the teaching reading by using multimodal texts. That is, the reading comprehension scores of the students in the experimental group were significantly different from that of the control group at .001 level. The mean score of the students in the experimental group was 15.24, and that of the control group was 10.60. This can be concluded that the mean score of the students in the experimental group was significantly higher than the control group.

## Conclusions and Discussions

The finding of the study revealed that the reading comprehension scores of students in the experimental group taught by using multimodal texts were significantly higher than that of the control group taught by the traditional method. This means that the use of multimodal texts in teaching reading had a positive effect on students' reading comprehension skills. The results of this study clearly proved that teaching reading by using multimodal texts was more effective than the traditional method. It could enhance students' reading comprehension skills better than the traditional method. The explanation is that, in this study the researcher designed to teach reading by using many modes of communication. The instructor presented information in many modes such as printed materials, printed along with pictures, and printed along with video. In addition, students had opportunity to do classroom activities in many modes such as

pictures matching, or animated games using PowerPoint presentation. This method of teaching was advantages in promoting students' participation in classroom activities. Like the idea of Vining (2014), teaching by using multimodal texts in classroom was an effective way to promote students' engagement in classroom activities. When students were presented with multimodal texts, they were more motivated and engaged in classroom activity. Moreover, the method of teaching designed in this study incorporated instruments including the various modes of communication. These appealed to students' different learning styles and further facilitated students' learning. Like the idea of Tomlinson (2014), materials presented in a variety mode in this study supported differentiated classroom. Students perceived the information from various modes and adapted their learning style in order to store information in their memory. It led students to perceive that it was easier to learn.

The results were in line with many studies. That is, a teaching by using multimodal texts has a positive impact on students. For example, Wash (2006) studied how primary and secondary school students interacted with multimodal texts in literacy learning. The finding revealed that when students were engaged in multimodal texts environment, they were clearly engaged in learning. Similarly, Rigas and Ayad (2010) investigated students' satisfaction and enjoyment through the use of multi-modal game in e-learning environment. The results showed that all users enjoyed all conditions of the game in learning. The students responded that multimodal games made them gained better enjoyment and understanding in learning. In addition Jacobs (2013) examined how the use of multimodal texts could support college freshmen learners as an academic writer and thinker. The result of the study showed that students gained a better understanding of how academic arguments were constructed when they were taught using multimodal texts. Furthermore, Yongjin (2013) examined the effects of different modes of presentation and its combinations to improve students listening ability. The result indicated that different modes of presentation promoted students' listening performance.

It can be concluded that this study confirms the advantage of employing multimodal texts in English reading class. Applying multimodal texts in teaching create enjoyment and engagement among the students who learned using multimodal texts. In such atmosphere, students improved their reading skills to comprehend texts. Also, it motivates students and captures their concentration to the reading tasks. However, there are some implications for the English instructor to consider. Firstly, attractive pictures can be an effective material for presenting new vocabulary. Secondly, authentic materials can be used to provide students with a valid model of language. Thirdly, teacher should create a relaxed atmosphere in the classroom. This can reduce students' anxiety and increase students' level of motivation. In conclusion, the teaching reading by using multimodal texts may well be one way to resolve the reading problems of EFL students. For EFL instructors, using multimodal texts in an English classroom might be a good alternative to help students to achieve in their learning and to allow teachers and students to work with the multimodal realities of the twenty-first century.

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# **The Competitiveness Mapping of Bookkeeping Services Professionals (Accounting Technician) in Indonesia**

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## **Abstract**

Indonesia already has a National Work Competence Standard of Indonesia on accounting technician/ bookkeeping which it adapted from the Indonesia Qualifications Framework (IQF) . The National Work Competence Standard of Indonesia and the Indonesia Qualification Framework as a competencies references that must be met by bookkeeping worker in Indonesia.

This study conduct to determine the profile and competitiveness of bookkeeping services (accounting technician) in Indonesia. The results of this study indicate that the competitive position bookkeeper profession (accounting technician) in Indonesia is still not strong enough. This is indicated by the small number of bookkeeper who has a valid certificate on competence work. The competitiveness of bookkeeper profession (accounting technician) in Indonesia has not distributed on all of region in Indonesia. The most competitiveness of bookkeeper profession (accounting technician) are concentrate in the Java island.

**Keywords:** Competence, Accounting Technician, Competitiveness

## **INTRODUCTION**

### **Background**

In an effort to support the liberalization of the services sector, particularly related to traffic or movement of skilled labor, ASEAN member countries signed the MRA (Mutual Recognition Agreement) on 19 November 2007. MRA is done to support the liberalization of the services sector based on justice principle. There are several meanings of the MRA, the first, the destination countries will recognize professional qualifications and training obtained of skilled labor from origin countries. Second, the country of origin is given the authority to certify the qualifications and training by giving a certificate. Third, recognition is not automatic. There is a process for the determination of standards and other requirements that apply both in the destination country or country of origin. On February 26, 2009, ASEAN countries agreed MRA Framework for the accounting services sector. According to CPC 862, accounting services, auditing and bookkeeping / bookkeeping classified as part of the sub-sector of "A" from "Services-Business Services" in the Services Sectoral Classification List (MTN.GNS / W / 120) (often called the CPC 862 ).

Based on the Global Competitiveness Index published annually by the World Economic Forum give portrait the competitiveness of 142 countries in the world. The Indonesia's ranking in the Global Competitiveness Index has increased from 50 in 2012 to 38 in 2013. In the year 2012/2013 index, Singapore gets 2 nd rank, Malaysia is 25th rank, Brunei is 28th rank, and Thailand is 38th rank. Based on the global competitiveness index, Indonesia must immediately to reform on regulatory in all sectors including bookkeeping / accounting technicians. In order

regulations in the field of bookkeeping / accounting technicians can be formulated with a precise it is necessary to mapping study of workers in the bookkeeper / accounting technicians field.

Indonesia already has an Indonesian Work Competence Standard, we called Standar Kompetensi Kerja Nasional Indonesia (SKKNI), field on accounting technician / bookkeeping based on the Indonesian Qualifications Framework (IQF) level. SKKNI and IQF as reference competencies that must be met by workforce bookkeeping in Indonesia. But until now there has not been study for mapping of the accounting technician competency in Indonesia in accordance with IQF and SKKNI.

Studies concerning the liberalization of the services sector including the ASEAN already done. Study by Keliat, et.al (2013) is concern with the mapping of skilled workers in Indonesia and ASEAN services liberalization. The study aimed to get an overview of the various service sectors that have been agreed within the ASEAN MRA and MRA Framework; map the competitiveness of Indonesian skilled labor in various sectors, identifies the challenges that will arise regarding the liberalization of the services sector in ASEAN and provide policy recommendations.

This study is expected to contribute and benefit the learning process in higher education and learning process. The contributions and benefits of study are: 1) to map the competencies of accounting students, 2) improve the quality of the learning process in the accounting course and practicum, 3) improve the quality of accounting lab module, 4) improve the competence of lecturers and students, 5) integrate the concept of link and match between the learning outcomes and work competency standards in accounting.

### **Research Question**

- 1) What is the profile of bookkeeping services (accounting technician) in Indonesia?
- 2) How does the competitiveness of bookkeeping services (accounting technician) in Indonesia?

## **THEORITICAL FRAMEWORK**

### **HISTORY OF SERVICES SECTOR LIBERALIZATION IN ASEAN**

In an effort to increase the liberalization of trade in services, WTO forming GATS (General Agreements on Trade in Services) to organize 12 trade liberalization of the services sector. GATS embraces some key principles, namely: the principle of non-discrimination which consists of most favored nation principle (MFN Principle) and national treatment, the principle of liberalization of market access, and the transparency principle.

The Asian economic crisis in 1997 devastated the economy and spawned social and political changes in some countries of ASEAN, including Indonesia and Thailand. Since that time, the liberalization of the services sector in ASEAN also found new momentum. Bali Concord II himself stated clearly that the liberalization of the services sector is a key element in the integration of ASEAN. All 13 ASEAN Summit in November 2007 agreed on the adoption of the Blueprint of the ASEAN Economic Community (AEC Blueprint) as a document of a comprehensive plan to guide the realization of the ASEAN Security Community by 2015. On February 26, 2009, ASEAN countries agreed MRA Framework for the services sector accounting (accountancy services). The MRA Framework provides guidance on the great principles and framework of cooperation which can be a guide for further negotiations on

MRA in this sector among ASEAN countries. According to CPC 862, accounting services, auditing and bookkeeping / bookkeeping classified as part of the sub-sector of "A" from "Services-Business Services" in the Services Sectoral Classification List (MTN.GNS / W / 120) (often called the CPC 862 ).

## NATIONAL QUALIFICATIONS FRAMEWORK OF INDONESIA (IQF) AND NATIONAL WORK COMPETENCE STANDARD OF INDONESIA

National Qualifications Framework of Indonesia arranged on Peraturan Presiden No. 8/2012 is the framework of competence qualification level and its function to reconcile, equalize, and integrate the field of education and the field of vocational training and work experience in order recognition of work competence in accordance with the structure of employment in various sector. IQF has 9 levels as shown in the following figure:



**Figure 1: Indonesian Qualification Framework**

Learning outcome is the ability gained through the internalization of knowledge, attitudes, skills, competencies, and work experience accumulation. Learning outcome is acquired through education or vocational training is expressed in the form of either a diploma certificate or competency certificate. Diploma certificate is a form of recognition of learning outcomes acquired through education, while work competency certificate is written evidence issued by an accredited professional certification institution that its explain a person has ability a particular work competence in accordance with the National Work Competence Standard of Indonesia (SKKNI).

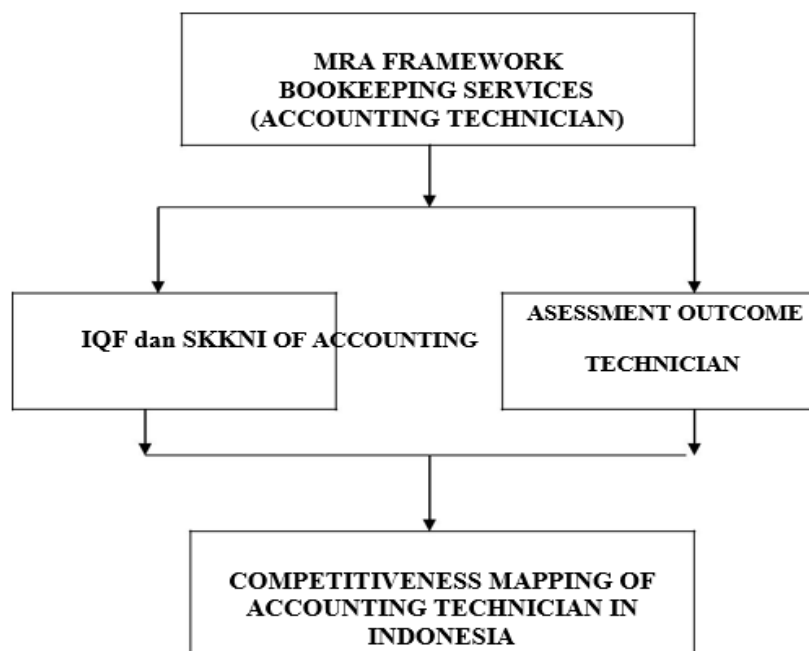
National Work Competence Standard of Indonesia (SKKNI) is a formulation workability covers aspects of knowledge, skill or skills and work attitudes that are relevant to the execution of duties and job requirements are defined, in accordance with the provisions of the legislation in force. SKKNI is the foundation of the development of competency-based training and development of professional competence certification system. In order to develop SKKNI, concerns and priorities need to be addressed in the fields of profession which contains occupational safety and health hazards.

## **THE NATIONAL BOARD FOR PROFESSIONAL CERTIFICATION (BNSP) and THE PROFESSIONAL CERTIFICATION INSTITUTE OF ACCOUNTING TECHNICIAN (LSP TEKNISI AKUNTANSI)**

The National Board for Professional Certification (BNSP) is a non-structural institution established by the Government Regulation No. 23/2004. BNSP is independent institution in carrying out its duties and be responsible to the President. BNSP task is to asses of work competence and give a competence certification, which in practice can give licenses to professional certification agency (LSP). BNSP has issued some regulation which its guide to the implementation of competency certification system that ensures the quality of maintenance of competence. In addition, coaching BNSP also intended to widen public access to services competency certification. For this purpose, coaching BNSP focused on: a. Quality assurance of competence certification system which its measurable, traceable, objective and accountable; b. Credibility of BNSP institutional, especially in giving licenses to LSP in each sector or profession; c. Increasing the capacity and effectiveness of the control system on competency certification implementation by LSP; d. Ensuring of competence and professionalism of Assessor Accreditation in accordance with the standards of assessors competence; e. The network expansion of competency certification services to the regions;

The Professional Certification Institute of Accounting Technician (LSP TA) is the professional certifications institute for accounting technician profession based on the National Work Competence Standard of Indonesia (SKKNI) who gets the license from the National Board for Professional Certification (BNSP) of the Republic of Indonesia. The task of LSP are: 1. implementing Competency Test / Asessment based on SKKNI field accounting technician, 2. maintenance of competence (surveillance), 3. development of standards of competence and assessment tools

### **RESEARCH FRAMEWORK**



**Figure 2:** Research Framework

## RESEARCH METHODOLOGY

### Research design

This study is essentially exploratory research to analyze the condition of labor competitiveness in the field of bookkeeping / accounting technicians using quantitative data that has never been done in Indonesia. One identifier competence of human resources that are easy to identify is the ownership of the work competency certificate is valid. Therefore, labor competitiveness in the field of bookkeeping / accounting technician in Indonesia in this study measured the number of certificates of competency of work owned by the bookkeeper in Indonesia, published by the National Board for Professional Certification in Indonesia (BNSP) RI. The data used are secondary data from the assessment results according SKKNI of accounting technicians field issued at 2013 . Methods of data analysis is descriptive analysis.

### Population

The population in this study were all bookkeeper that following the assessment of accounting technicians conduct by The Professional Certification Institute of Accounting Technician on 2013.

### Data Collection

Sources of data used in this research is secondary data in the form of a report on the assessment results of bookkeeper / accounting technicians in Indonesia, which are conducted by the The Professional Certification Institute of Accounting Technician on 2013.

### Data Analysis

Methods of data analysis used in this research is descriptive analysis. Analyses were performed by describing the competitiveness of professional bookkeeping services (accounting technicians) based on the level of achievement of competencies workforce bookkeeping / accounting technicians in accordance SKKNI of Accounting Technician.

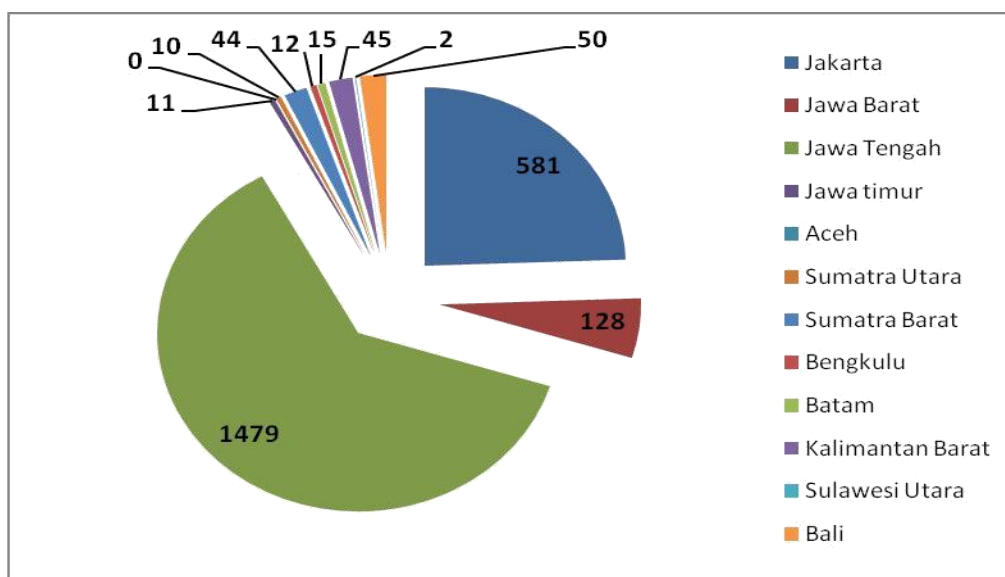
## DATA ANALYSIS AND DISCUSSION

Competitiveness of bookkeeping (accounting technician) can be sorted by unit or cluster of competence, such as preparation of financial statement based on SAK ETAP cluster, cash document management cluster, etc. The following table shows the mapping of competitiveness bookkeeper in Indonesia based on cluster:

**Table 1:** Competitiveness of Accounting Technician (Based on Cluster) – 2013

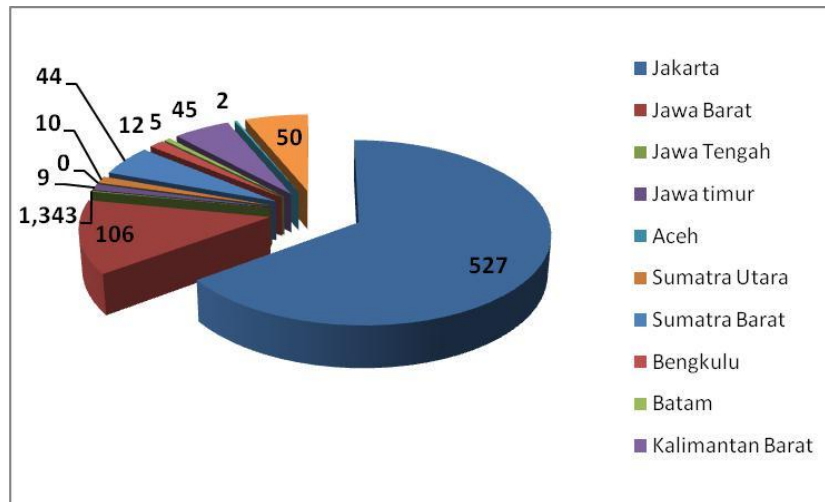
NO	REGION	CLUSTER				TOTAL
		Preparation of financial Statement	Cash Document Management	Subsidiary Document Management	Operator of Accounting Software	
1	Jakarta	527	27	27	0	581
2	Jawa Barat	106	11	11	0	128
3	Jawa Tengah	1.343	52	47	37	1.479
4	Jawa timur	9	0	0	2	11

NO	REGION	CLUSTER				TOTAL
		Preparation of financial Statement	Cash Document Management	Subsidiary Document Management	Operator of Accounting Software	
5	Aceh	0	0	0	0	0
6	Sumatra Utara	10	0	0	0	10
7	Sumatra Barat	44	0	0	0	44
8	Bengkulu	12	0	0	0	12
9	Batam	5	5	5	0	15
10	Kalimantan Barat	45	0	0	0	45
11	Sulawesi Utara	2	0	0	0	2
12	Bali	50	0	0	0	50
	<b>TOTAL</b>	<b>2.153</b>	<b>95</b>	<b>90</b>	<b>39</b>	<b>2.377</b>



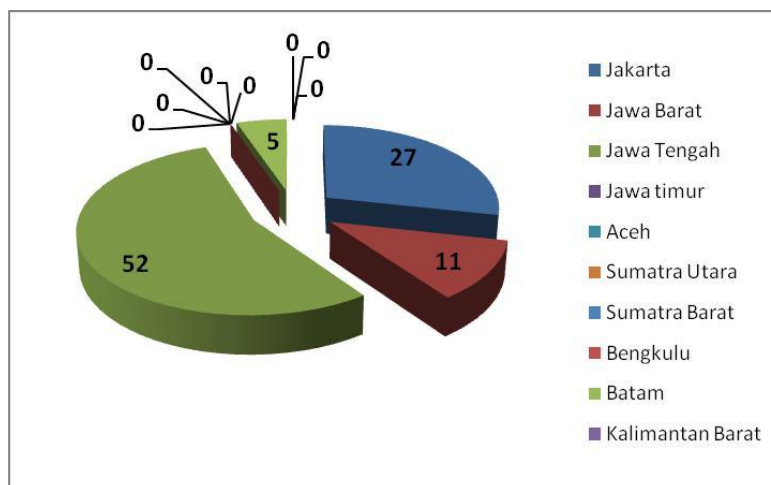
**Graph 1:** The Accounting Technician Competitiveness Based on Cluster Per Region in Indonesia

The graph above shows the competitiveness of bookkeeping (accounting technician) in Indonesia based on preparation of financial statement clusters. Most bookkeeper are competent from the area of Java. The largest number were in the region of Central Java as 1,479 people, followed by Jakarta as 581 people, as 128 people in West Java, East Java, as 11 people. As for outside area of Java island is the largest number in the region of Bali as 50 people, followed by West Kalimantan as 45 people, as 44 people of West Sumatra, Batam as 15 people, Bengkulu as 12 people, 10 people in North Sumatra and 2 people in North Sulawesi.



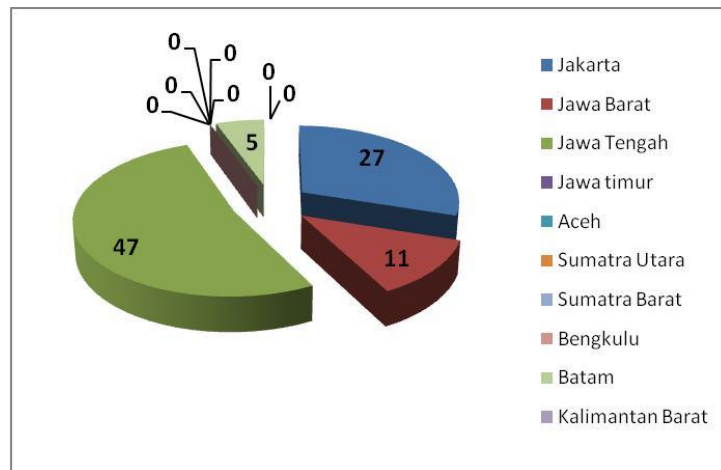
**Graph 2:** The Accounting Technician Competitiveness Based on Preparation of Financial Statement Cluster Per Region in Indonesia

If seen spreading in region of Indonesia, the bookkeeper is competent for the preparation of financial statement cluster are mostly located in Central Java region as many as 1,343 people, in Jakarta 527 people, in West Java 106 people, in Bali 50 people, in West Kalimantan 45 people, 44 people in West Sumatra, Bengkulu 12 people, 10 people in North Sumatra, Batam 5 people and 2 people in North Sulawesi.



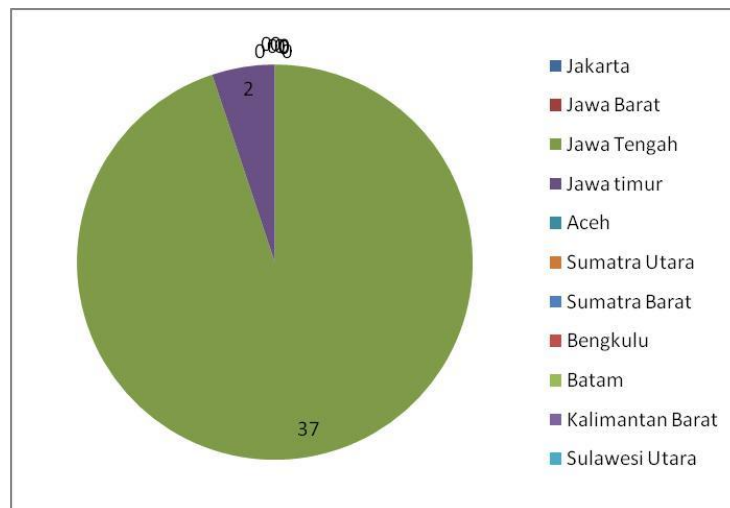
**Graph 3:** The Accounting Technician Competitiveness Based on Document Cash Management Cluster Per Region in Indonesia

If seen spreading in region of Indonesia, the bookkeeper is competent for cash document management cluster mostly located in Central Java as many as 52 people, in Jakarta 27 people, 11 people in West Java, and Batam 5 people.



**Graph 3:** The Accounting Technician Competitiveness Based on Subsidiary Document Cluster, Per Region in Indonesia

If seen spreading in parts of Indonesia, the bookkeeper is competent to subsidiary documents management cluster are mostly located in Central Java as many as 47 people, in Jakarta 27 people, 11 people in West Java, and Batam 5 people.



**Graph 4:** The Accounting Technician Competitiveness Based on Operator Accounting Software Cluster Per Region in Indonesia

If seen spreading in region of Indonesia, the bookkeeper is competent for operator accounting software cluster are mostly located in Central Java as many as 37 people, and in East Java 2 people.

## CONCLUSION, IMPLICATION AND LIMITATION

### Conclusion

Based on the results of data penolahan above it can be concluded as follows:

1. The competitiveness of bookkeeper profession (accounting technician) in Indonesia in 2013, it is indicated by the small number of bookkeeper who has a valid certificate of competence work. The position of the most powerful competitiveness in 2013 in the region of Central Java, while the weakest in the region of Aceh

2. The competitiveness of bookkeeper profession (accounting technician) in Indonesia has not been evenly distributed across Indonesia. The competitiveness bookkeeper profession (accounting technician) on the Java is much higher than a bookkeeper on the outside of Java

### **Implication**

Based on these results, the national policy should be formulated to:

1. Improving the competitiveness of bookkeeper profession (accounting technician) in Indonesia by enhancing the professional competence of bookkeeper (accounting technicians in Indonesia) either through formal and non-formal education
2. Increased the competence of bookkeeper professions (accounting technician) is not only concentrated in Java but also outside Java.
3. Increase the number of professional bookkeeper (accounting technicians) who have a certificate of competence of work published by the National Board for Professional Certification of the Republic of Indonesia (BNSP) RI

### **Limitations**

The limitations of the research that has been done among other methods of measuring competitiveness of bookkeeping (accounting technician) simply use the results of the competency test conducted by LSP Accounting Technicians during 2013.

### **Suggestion**

The suggestion for next research are develop a competitiveness measurement method of bookkeeping (accounting technician), for example by using primary data in the form of observation / interviews.

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# **The Effective Organizational Structure of Institutional Research Offices: Multiple Case Studies of Higher Education Institutions in Thailand**

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## **Abstract**

An institutional research (IR) office or unit was variedly located and departmentalized within the organizational structure of a college or university in Thailand. This research aimed to understand the structural and contextual dimensions of the IR offices in Thai universities relating to effectively conduct IR. It is also intended to provide useful information on how to develop an effective structure of IR offices in Thai higher institutions located in Bangkok. To attain this aim, the researcher used qualitative multiple case study as the research method. The important findings revealed that the IR office in public higher institution used as the case study was located in research and development institution of the university, which reported to the vice president for research affairs, with the mission of IR support services, whereas the IR office in the autonomous higher institution was located in the strategy office, which reported to the vice president for planning and development affairs, with the mission of conducting IR to support executive decision making. However, the IR office in private higher institution was located in the research service center, where researchers and supporting staff conducted both IR and supported professors' academic research. In order to design an effective organizational structure for the IR office, a centralized unit with systematic linkage in planning and information for decision making under the vice president for planning and development affairs and an executive board for university institutional research to decide on the institution direction should be implemented.

**Keywords:** Effective Organizational Structure, Organizational Structure Location, Organizational Context Factor, Institutional Research Office, Thai Higher Education Institutions

## **Introduction**

There are some differences between the organizational structures of institutional research (IR) offices or units in a Thai higher education institution, and those in the contexts of American and Canadian colleges or universities (Muffo, 1999; Volkwein, 1990; Volkwein, Liu, & Woodell, 2012). Traditionally, an IR office in Thai public higher education institutions is located in the office of the president at the university level. It is led by the vice president for planning and development affairs, who reports directly to the president of the institution. In other cases, it is more likely to locate at a faculty or college level such as the dean office. This location of an IR office in the organizational structure is commonly found within a large university with its decentralization to all levels of middle-line units in the hierarchy such as faculties or colleges. Here, a few of IR officers, sometime hired as a temporary employee with at least a qualification of a bachelor's degree, are under the structure of the dean, or the assigned associate dean with their mission of conducting IR

to support their managerial and planning decision making. Volkwein (2008) mentioned this kind of IR organizational structure location as a craft structure which numbers of personnel in this unit and their IR research professional experiences are gradually increased. However, this IR office is only seemed as a small adhocracy that under the office of the executive board: the president or the vice president for academic affairs, whereas IR office, based on Thai university context, is differently under the vice president for planning and development affairs.

According to IR office departmentalization that all duties of IR staffs have been decentralized in order to accomplish IR office missions, two differences are found in IR offices of some Thai universities: (1) Functional or discipline-based classification was used to departmentalize IR officers according to their expertise such as information management and support, reporting, planning and special projects, research and development, and (2) Product or service-based classification was used to departmentalize IR officers according to IR information, or products serving clients; for instance, planning and budget unit, academic support unit, enrollment and registration unit, and students affairs support unit (Volkwein, 2008; Volkwein, Liu, & Woodell, 2012).

In order to effectively operate IR offices and meet its organizational context with its diversity of IR organizational structure in aspects of the locations as well as departmentalization is crucial (Taylor, 1999; Volkwein, Liu, & Woodell, 2012). Interestingly, there is no relevant studies pertinent to the IR effective organizational structure based on Thai context. An institutional culture, expectations and administrative culture of evidence-based decision-making are the organizational contextual factors that differentiate Thai and overseas higher education institutions. The results of IR are beneficial for the administrators for their decision making, and for all performance of personnel in Thai higher education institutions. Furthermore, IR organizational structure, its organizational context, and its IR effective organizational structure of Thai higher education institutions are vital to acknowledge and understand. This research, therefore, aims to study the mentioned IR organizational structure with research questions and methodology as follows.

## **Research Objectives**

1. To understand IR organizational structure and organizational context that relating to effective operation of IR offices in Thai higher education institutions.
2. To develop an effective organizational structure of IR offices in Thai higher education institutions.

## **Paradigm of the Study**

A multiple case study was the research design of this study based on the qualitative approach (Stake, 1995; Stake, 2006) to answer the research questions by using in-depth interviews, observations, and the document reviews and syntheses. Sources of key informants, as case studies, were higher education administrators, IR experts, as well as IR administrators and personnel of Thai higher education institutions in Bangkok. The purposeful sampling was used to select key informants and documents (Patton, 2015). There were 5 key informants ( $\Theta_1$ - $\Theta_5$ ) comprised of higher education administrators and IR experts, and also 9 key informants consisted of IR administrators and personnel from three different locations ( $\Theta_1$ - $\Theta_3$ ) which were (a) IR office from one research and development institution of Thai public university ( $\Theta_1$ ), (b) IR and information office from the strategy office of one

autonomous university ( $\Theta_2$ ), and (c) IR office from a research center of one private university ( $\Theta_3$ ). Within-case and cross-case analysis was used to analyze the qualitative data from both key informants and documents according to Stake (1995, pp.39-77) and Miles, Huberman, & Saldaña (2014, pp.100-103) by continually analyzing data both during and after the data collection process with 3 activities: data condensation, data display, and conclusion drawing and verification. The methods of triangulation, member feedback and check, and checking out rival explanations were also used to ensure the trustworthiness of the data (Naiyapatana, 2010; Miles, Huberman, & Saldaña, 2014)

## Findings

### **1. What are reasons (or any conditions) of locating the IR office within the organizational structure of a college or university in Thailand? And how are they related?**

The first key informant ( $\theta_1$ ) whose expertise in Thai higher education administration used the IR findings to set up the framework of the 15- Year Long Range Plan on Higher Education of Thailand, and to continually use it for the strategic decision-making for Thai higher education foundation. He is also the executive board of the Association of Institutional Research and Higher Education Department. He pointed that the location of an IR office in the organizational structure of a college or university being established is mainly under the university president's view in terms of the use of IR empirical findings for set up the policy making, planning and supporting the university strategic decision-making. In this context, the president directs IR administrators and support staffs conducting IR research, and use those IR findings to set up the university strategic planning. He believes that the traditional administration rules is a condition establishing IR organizational structure location to be under the university affair organizations: the division of planning under the office of the president, reported to the vice president of planning and development division. Furthermore, IR organizational structure location is being established in an aspect of the administrative committees of IR institution in a university in order to promote the IR office operation, to gain research questions on both broaden and deepened dimensions, and to meet the right needs in bringing IR findings for further development of executive boards in each administrative units.

The second key informant ( $\theta_2$ ) as a university president of one autonomous university has been continually using IR information to support the strategic decision-making since he was the vice president for planning and development affairs. He mentioned that the administration based on the key performance indicators for quality assurance nowadays encourage the use of the research information to be guidelines for the development. He also viewed that an IR organizational structure location that is directly being established under the president could promote the research questions that exactly meet the higher executive administrators' interests for further strategic decision making. In addition, it also promotes the fiscal funding and the cooperation from another division within a university. The conflict of interests between personnel in bringing IR findings to develop a university is relatively reduced.

The third key informant ( $\theta_3$ ) as the director of The Strategic Wisdom and Research Institute (or called as The Research and Development Institute in some Thai universities) of one public university consistently expressed the agreement with the first two key informants that IR office is directly under the supervision of the university president because it could

facilitate of bringing IR findings to be practically used and to be avoided the conflict of interests when IR office is under the middle-line managers. In case of an overloaded burden of the university president, the third key informant suggested that the vice president for research affairs should be in charge of the IR office supervision as IR office can be directly supported by relevant coordinators and experts. Additionally, the administrative mechanism of personnel in the research support bureau could facilitate and monitor an IR research conduct promptly.

In contrast, the forth key informant ( $\theta_4$ ) who has a direct experience in the project management and IR at national-level more than 30 years (he also was the president in one autonomous university in the last 5 years) viewed that the great belief and priority of the university president determines IR organizational position, that is, if IR findings or information are beneficial for framing the policy and plan as well as the strategic decision making, IR office tends to be localized within the division of planning, the office the president which is under the supervision of the vice president for planning and development. In case of viewing IR as the same academic research, IR office tends, therefore, to be localized within the research support bureau (or, the research and development institute) that is under the supervision of the vice president for research affairs. In this sense, IR annual research grants are corporately coordinated by the support staffs to interested researchers instead of conducting IR by themselves. Here, the forth key informant ( $\theta_4$ ) differentiated his views from the third key informant ( $\theta_3$ ) that IR office should be localized within the policy and planning division aiming to use IR information developing an educational administration instead of supporting conducting an academic research aiming to serve the professional interests of each individual or group of faculty members.

Furthermore, the forth key informant ( $\theta_4$ ) pointed out that the university president and university council members tend to centralize all unit in the university (centralized unit), this also includes IR office to be centralized by under the supervision of either the university president, or the vice president instead of the decentralized unit that ask all each faculty dean to conduct IR correlating to each own identity of faculty. The belief of IR office as a centralized unit is related to the IR organizational structure location in the university structure; this includes the resource support and personnel career path promotion, too.

The fifth key informant ( $\theta_5$ ) is a professor of one autonomous university who has experiences in IR, teaching, and administration at higher education-level. She is an external IR committee member of one celebrated autonomous Thai university. She agreed with the first ( $\theta_1$ ) and the forth key informants ( $\theta_4$ ) in terms of giving the IR priority by the president that determines IR organizational structure location within the university structure. She also added that the president should be the one directly supervise an IR office by promoting his or her motivation and career advancement to the IR support staffs and administrator. Moreover, the president is able to formulate IR questions which provide useful information required for decision making at strategic level.

According to five experts' viewpoints presented above, it can be summarized into reasons and conditions as well as their interrelation for determining IR organizational structure location under the university president, the vice president for planning and development affairs, the vice president for research affairs, and IR committee council respectively as shown in table 1.

**Table 1:** Reasons/conditions of IR organizational structure location based on expert viewpoints.

Research questions	Higher education administrators (Cases: The executive of Office of the Higher Education Commission, university president, & vice president)			Experts in IR (Cases: IR Project administrator, & IR administrator & researcher)	
	$\theta_1$	$\theta_2$	$\theta_3$	$\theta_4$	$\theta_5$
I1. What are reasons (or any conditions) of locating the IR office within the organizational structure of a college or university in Thailand?	1. Personalities and management styles of the president with regard to uses of IR results for making decisions 2. Facilitate doing IR in practice 3. Institutional culture and rules and regulations of the institution 4. Facilitate getting good IR questions and useful information that meet the needs of the college or university CEO	1. IR information help improve the quality assurance system of the institution 2. IR information meet a need for decision-making of the CEO of institution in time 3. IR information help institutional development in time 4. Help driving IR information for rapid changes or transforms of institutional missions	1. Get good IR questions that meet a greater need for decision-making of CEO 2. Have internal experts for doing IR effectively 3. Facilitate getting IR done in a timely manner 4. Get useful IR results for administrative decision-making 5. Enhance the uses of IR information for decision-making	1. Administrative culture and management styles of the administrators 2. Promote the career paths of IR office staffs 3. Get useful IR information for planning and decision-making 4. Get useful IR information for institutional development 5. Benefit of IR information for the university council	1. Promote career paths of the IR staffs 2. Get good IR questions and useful results that meet a greater need of the CEO of institution 3. Facilitate gathering IR data from all administrative units within the institution efficiently 4. Facilitate getting a good team of experts in the institution for doing IR effectively 5. Facilitate the uses of IR information for planning and resourcing
I2. How do those reasons or conditions relate to the IR office location under each university administrator?	1-2: Reasons and conditions of locating IR office to be under the president 3-4: Reasons of IR office location under the vice president for planning and development affairs 4: Condition of locating IR office under the executive committees of IR	1-4: Reasons of locating IR office to be under the university college or president	1-3: Reasons of locating IR office to be under the supervision vice president for research affairs 4: Conditions of organizing committees of IR (president as chairman, all vice presidents for each affair are committee members)	1-2: Reasons of locating IR office to be under the president 3-4: IR office should be under by the vice president for planning & development affairs 4: IR office administration supervised by the university council	1-3: Reasons & conditions of locating IR office under the vice president for planning & development affairs 5: Reason of IR office location should be supervised by the university president

## 2. What are aspects of IR organizational context facilitating an IR office operation? How do they facilitate?

All five key informants agreed that the context of the higher level of administrators (especially the university president) who pay close attention in bringing IR information to the policy making process, the planning and strategic decision making, continually and

sufficiently supporting resources to IR office, being enthusiasm of using IR information for improving and developing the service quality of the university. This is called the desired characteristics of the higher level of university administrators that facilitate the IR office mission. In addition, the executive administrator of higher education ( $\theta_1$  and  $\theta_2$ ) as well as the IR expert ( $\theta_5$ ) agreed that having the desired characteristics of an IR office administrator also facilitates the IR office mission; for example, being trustful and engaged, having leadership and research mind, know and aware of all IR mission which is consistent to the university mission, be friendly, be able to formulate good IR questions and inquiry findings that really meet the higher level of university administrators.

Moreover, the courtesy support of the executive administrators of university in all aspects: encouraging others to conduct IR, cooperatively use IR information for reforming or transforming an educational process, be able to cope with the conflict of interests, ignorance of some administrators when implementing IR information in practice. Key informants  $\theta_1$  and  $\theta_2$  agreed that human resource administration is a contextual factor facilitating IR office mission whereas Key informants  $\theta_1$  and  $\theta_5$  viewed that the organizational culture that values the planning and decision making based on an empirical research findings with the cooperation of the research questions from the top level, research lecturers, and academic support personnel could enhance the successful IR conduct. With a supportive mechanism to promote IR personnel accountability, research engagement, enthusiasm to learn and develop their own career advancement, these are able to facilitate IR to meet IR office objectives.

### **3. IR organizational structure and the systematic mechanism coordinating IR internal units and facilitating IR office to achieve the mission success.**

According to the document review and an in-depth interview of key informants from three different IR offices used as case studies, it found that the research office of three universities are only unit, or sub-unit under the higher level division: institution, bureau, or center. Their missions are not exclusively aiming to conduct IR. The head of IR office is in charge of the administrative department, division, or unit depending on the system naming and the administrative concept of localizing units with its structure. The university administrator ( $\theta_2$ ) revealed that the president of this autonomous university is now thinking of dividing the research and information unit into another unit when the numbers of human resources are sufficient as IR is viewed as a priority for the strategic planning and decision making of the university quality development to the world class. The research division which is under the research and development institute is in charge of IR, information management, promoting conducting IR, and institutional research funding administration. For IR office of the second university ( $\theta_2$ ) which is in the Strategic Wisdom and Research Institute, there is no separation of tasks whereas there is no clear of task in each unit of IR office of the third university ( $\theta_3$ ) localized within the research service center of a private university.

In addition, research results has indicated that a horizontal coordinating system between IR staff members and other department within the research and development is obscure. However, organizing position of IR office under the research and development institution has no apparent systematic mechanism coordinating to reinforce presentation of research results of completed institutes in order to adapt to other institutes. Especially, planning mission by strategic program personnel of president's office, providing institutional research' facilitators and strategic program as a vice president (table No. 2). If the vice president controlled them separately, being a coordinator of doing research and using

research result would not be a permanent warrantee in the future. In case of horizontal coordinating system between personal from different section within strategic office ( $\Theta_1$ ) and research service center ( $\Theta_3$ ), it is distinct because of the matric organizational structure, operated by using the structure of office in order to connect the personals from different department, to finish working punctually.

**Table 2:** Contexts of IR Office that is advantageous for launching the mission successfully, due to president's and personnel's perspectives in 3 IR offices

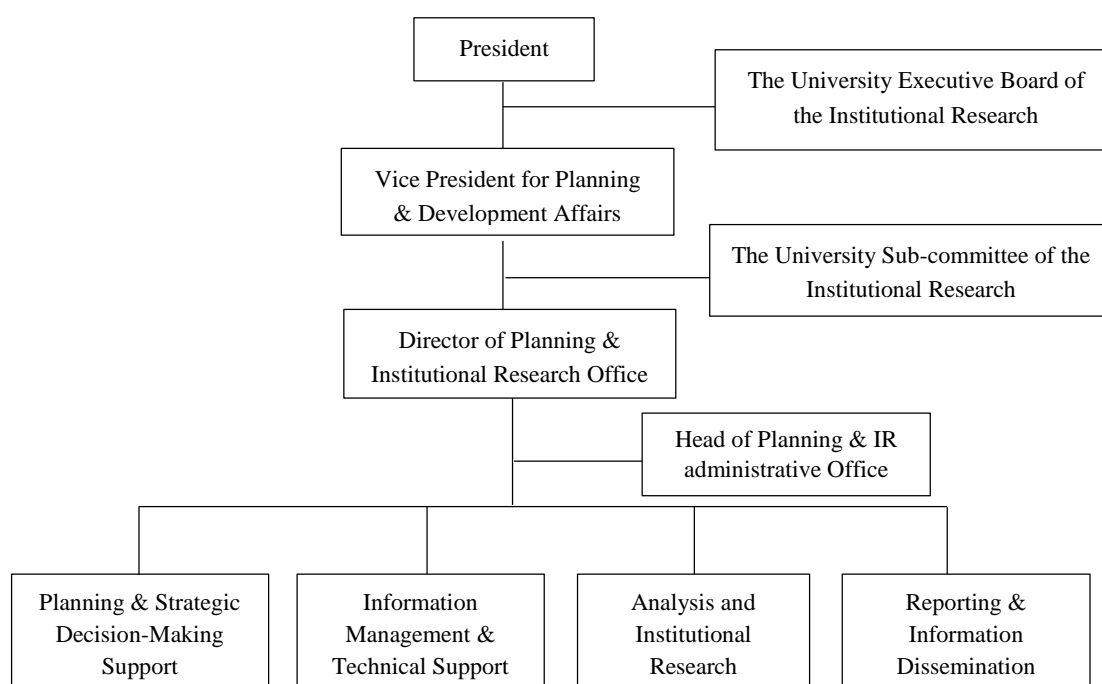
Research Questions	Case Study 1 ( $\Theta_1$ ): within R&D institute at one public university	Case Study 2 ( $\Theta_2$ ): within Strategic Division at one autonomous university	Case Study 3 ( $\Theta_3$ ): within Research Center at one private university
I <sub>3</sub> . What is the characteristic of the structures of organization and systematic mechanism connects internal departments in IR office of the university for launching its mission successfully.	1. It is a part of research & development institute. It makes a position of head of IR department which is higher than it used to be. The head of IR department works under the head of planning division. 2. Divide inside structure of the IR office into, (a) IR fund & management (b) IR services and (c) IR information 3. Head of IR office works under the director of research & development institute which has the vice president for planning & development affairs 4. The vice president for planning & research affairs supervises both research & development institute causing a mechanism of connection and leading research results in IR from research department for planning and decision-making	1. It is a part of strategy office (used to be named as planning division), separated from president office. So, the head of IR has been raised higher than it was the head of IR under the head of planning division 2. Divide inside structure of IR into, (a) IR and (b) information management 3. The head of IR works under the director of strategy division, supervised by the vice president for planning & development affairs 4. Personnel of IR work with horizon coordinators and groups, planning & strategy, funding & resource management under the matric organizational structure	1. It is one the duties of research service center. This makes a head of IR and other heads in the research field or even other fields are in the same level. 2. Not relatively divine inside structure of IR office 3. A head of IR works under a director of research service center, and supervised by the vice president for research affairs 4. IR combines horizontal coordinators with promotion works; research, poll/journal and conference, training, seminar under the matric organizational structure

#### 4. What forms of organizational structure and systematic mechanism connecting sub-units within an effective IR office of Thai university would be like?

According to research results, the interviews with renowned executive administrators in higher education and experts in IR ( $\Theta_1$ - $\Theta_5$ ). It is also including the executive and experts in case study of IR office ( $\Theta_1$ - $\Theta_3$ ) above can be concluded as a form of organization and systematic mechanism connects internal sub-units within the IR office as follows.

**Mission:** The core missions of IR office are study, analysis, research, and report results, and officially promulgate information about the operation of the university validly

and reliably. Its purposes are planning and strategic decision-making support for executives, and also reporting the results of an operation of the university with social responsibility.



**Figure 1:** A Structure of an Effective Organization of Institutional Research

**Organizational structure and systematic mechanism of IR office:** To effectively achieve the missions. IR office should be an institute that combines operation service centers as a centralized operation. It is supervised by the president or the vice president for planning and development affairs, and be integrated with planning and funding, information management and develop data base, and also report the results of an operation of the university with social responsibility as the organization structure in figure 1. According to the figure 1, it shows the organizational structure of an IR office that has been developed from significant findings of qualitative multiple case study research. Operation management is set to support information because of planning and strategic decision-making of the university. The university executive board of the IR consists of the president as chairperson of the board. The vice presidents for each administrative affair are sub-committees and the vice president for planning and development affairs is as a secretary of the board, be a mechanism to facilitate formulating good IR questions that meet the interests and needs of the vice presidents responsible for each administrative university affair and can take part in the nomination of well-qualified faculty or support staff members to conduct IR on a particular topic. It also move forward uses of the IR results to change or transform the process that committees are involved to have more positive outcomes in the age of quality competition among universities.

However, the above organizational structure locations of the IR offices are appropriate for large or medium research universities (5,000 or more students) in Bangkok. Small universities, on the other hand, might condense and decrease the line of authority by directly assign to IR office director. Nevertheless, position formulation and dividing inside organizational structure of institutional research office by institute structure plan above is

suitable for large or medium university in Bangkok (at least 5,000 students), and be concentrated on mission of research as an outstanding identity. For the small university, adjusts the work, or combine it together, and diminish commandant line from the president to a director of institutional research directly.

## **Conclusions, discussion and suggestions**

Experts in IR and higher education of Thailand agreed that organizational and administrative culture as well as personalities and management styles of the president and vice presidents responsible for middle-line institutional units, were major factors that help facilitate getting good IR questions which are relevant to the decision-making needs of the institutional development. They also believed that the needs of using IR findings for planning and supporting the strategic decision makings on the processes of university quality assurance and accreditation were reasons and conditions related to the location of an IR office under the president or vice president of the research or development affairs.

This structural position of IR office assists all faculty and staff members in every organizational units within the institution to get collaborate in an IR process, and utilize IR findings for institutional improvement efficiently and effectively. It also allows the IR staff members to get informative and well-focused IR questions, therefore, they tend to meet adequately the information needs and interests of the president, vice presidents, and other middle-line administrators. These findings generally agree with those done by Kircher & Enyeart (2009) found that locating an IR office under the president helped IR staffs could do IR interchangeably and cooperatively among faculty and support staff members from any department or division within the institution. It also helped the IR administrator and support staffs' perceptions and understanding of possible threats or crises of the institution correctly.

However, when a university becomes larger, a president has a mission focusing on building a relationship between outer institutes, and searching for enough funding to operate university activities. A tendency of attention in cooperation and the institutes is decreased, and related vice president is responsible for this. 2 in 3 of institutional research office case study from this research work under a vice president for research, but the other is under a vice president for planning and development. This phenomenon is different from higher education institute in United States of America, which usually found under a vice president of academic affairs and a vice president of planning, funding, finance and development respectively (Lindquist, 1999; Citing in Volkwein, 2008) because working under a vice president of academic affairs would encourage personnel to address the issue about learning management, which is the main mission of the university, and they acknowledge necessary information for making a decision or improving learning management in every levels of university (Taylor, 1999).

Besides, accessing to be with academic affairs (except allocating resources and reform) causes remaining the neutral image of the institutional research office (Kircher & Enyeart, 2009) base on senses of university's personnel that might rather trust in research and study from institutional research.

The research results indicated that the IR office should be located under the vice president for planning and development affairs because this organizational position is linked directly with the vice president of planning and development. It facilitates the process of getting IR information for supporting strategic decision-making in planning, allocating funds, and development of the university. However, major limitations of locating an IR

office under the university vice president for these administrative affairs, such as the insufficiency of required resources, especially research funds and skilled researchers, for doing IR effectively as well as good IR questions that meet the interests of university executives responsible for various kinds of administrative works. The first and third key informants of this research ( $\theta_1$  &  $\theta_3$ ) and some foreign experts in IR (e.g., Taylor, 1999; Kircher & Enyeart, 2009) believed that these limitations could be solved by formulating committees of the university executive board for IR composed of the president as the chairperson, all vice presidents for each administrative affair as members, and the vice president for planning and development affairs as the secretary. The committees of this executive board would facilitate the core process to conduct IR efficiently and effectively in Thai colleges and universities. The study has useful information for executive for the university in Bangkok. It supposes to be considered for the location and departmentalization within IR office in the organizational structure of the university effectively. However, if organizational structure of IR is used as a prototype, should consider other related factors such as size and mission of the college and university. Furthermore, the IR office for a particular location in the institutional structure should be evaluated its effectiveness in terms of IR productivity and utilization in the future.

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# **Assessment of Bachelor of Elementary Education (BEED) Student Teaching Program towards the Development of Student Teaching Manual**

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## **Abstract**

Student Teaching Program (STP) caps the professional practice in Teacher Education Curriculum. Hence, STP needs to be assessed in the following components: Program Objectives, Administration, Supervision, Policies and Guidelines, Instructional Activities, and Methods of Assessment towards the development of Student Teaching Manual (STM). The study employed a descriptive method of research using normative survey technique with documentary analysis. Unstructured interview was used to supplement the data. Results indicated that the level of effectiveness of STP in relation to its component was generally effective. As rated by the stakeholders, supervision was consistently ranked 1st, very effective and the other components were all rated effective. Despite the fact that majority of the components were effective except for supervision which was rated very effective, yet opportunities for improvement of the implementation of STP could still be explored through the development of Student Teaching Manual

**Keywords:** Assessment, Beed, Student Teaching, Manual

## **Introduction**

Student Teaching caps all educational courses in the Teacher Education Curriculum. It is believed to be the most significant program for field experience in teacher preparation and professional practice. Traditionally labeled as “field experience program”. Student Teaching aims to provide systematic and realistic contacts between teacher education students and the tasks involved in teaching. Hence, field experience provides an authentic context in which pre-service teachers gain empirical teaching expertise intertwined with the complexities of the teaching knowledge that helps “to be teachers” restructure their vocation with greater fervor and commitment.

Corollary to the above significance of Student Teaching Program (STP), stated in the nature and description of Bachelor of Elementary Education STP of the Commission of Higher Education (CHED) Memorandum Order No. 11, series of 1999, states that the quality of educational process depends on the level of education and the professional training of would-be teachers. According to Reganit et al. (2004), student teaching is a phase in teachers training which puts to practice the theories and principles and understanding learned by the student in the professional course.

As such, the impact of the aforecited proposition poses a challenge to all Teacher Education Institutions (TEIs) of the Philippines, more specially for those TEIs classified under Center of Excellence (COE) in Teacher Education. Student Teaching is critically an important program to be assessed. The journey to meaningful teaching experiences should be made clear

to the end users, the student teaching supervisors and the student teachers who are the benefactors of the program. At this juncture, it is likewise necessary. Among the TEIs to have an in-depth reexamination of the written policies and guidelines set by administrators in the existing STP of the BEED in the ESSU System in order to see the actualities of the program and suggest ways on how to revitalize it. In as much as objective assessment is necessary, the existing STP guidelines of ESSU should be revisited and analyzed carefully

Considerably, after the assessment of the status of STP, it is of utmost importance that weaknesses of the program be identified. Based on the identified needs/weaknesses of the program, the researcher would be working towards the development of a Student Teaching Manual (STM) for BEED Student Teaching Program of ESSU System.

The manual would be a vital document which the researcher would be confident that the benefactors (student teachers) will have a clearer path towards a meaningful journey to a successful teaching profession.

## **Statement of the Problem**

This particular study assessed the Student Teaching Program (STP) of the BEED in the Eastern Samar State University System.

Specifically, the study endeavored to answer the following questions:

1. What is the status of the STP of the Bachelor of Elementary Education (BEED) in ESSU System?
2. What is the assessment of the stakeholders (administrators, cooperating teachers, and student teachers) in the following components of the Student Teaching Program in ESSU System
  - 2.1. Program objectives;
  - 2.2. Administration and supervision;
  - 2.3. Policies and guidelines;
  - 2.4. Instructional activities; and
  - 2.5. Methods of assessment?
3. What is the level of effectiveness of the Student Teaching Program of BEED in the ESSU System in relation to the aforecited components?
4. What are the problems/weaknesses encountered by the stakeholders and their level of seriousness in relation to the components of STP of the BEED in the ESSU System ?
5. Based on the identified problems/weaknesses of the STP in ESSU System what additional policies and guidelines are to be incorporated towards the development of a BEED Student Teaching Manual?

## **Research Framework**

Assessment of evaluation is a process that stakeholders of school perform in order to gather data that will enable them to decide whether to accept, change, or eliminate something – the curriculum in general (Ornstein & Hunkins, 1998)

The present study is anchored on the assessment of an existing educational program which included its components as well as the delivery of such components. In this study, the STP of ESSU System was assessed. An adaptation model from the most common program

evaluation model, otherwise called as Context-Input-Process-Product (CIPP) was utilized in the study.

The Context-Input-Process-Product (CIPP) Model was forwarded by Daniel Stufflebeam which was devised in 1985. This CIPP approach to evaluation is rooted in its definition of evaluation as the process of delineating, obtaining and providing useful information for judging decision alternatives (<http://www.wmich.edu/evalctr/checklist/cippchecklist/htm>). Evaluation in the study is a term used synonymously with assessment.

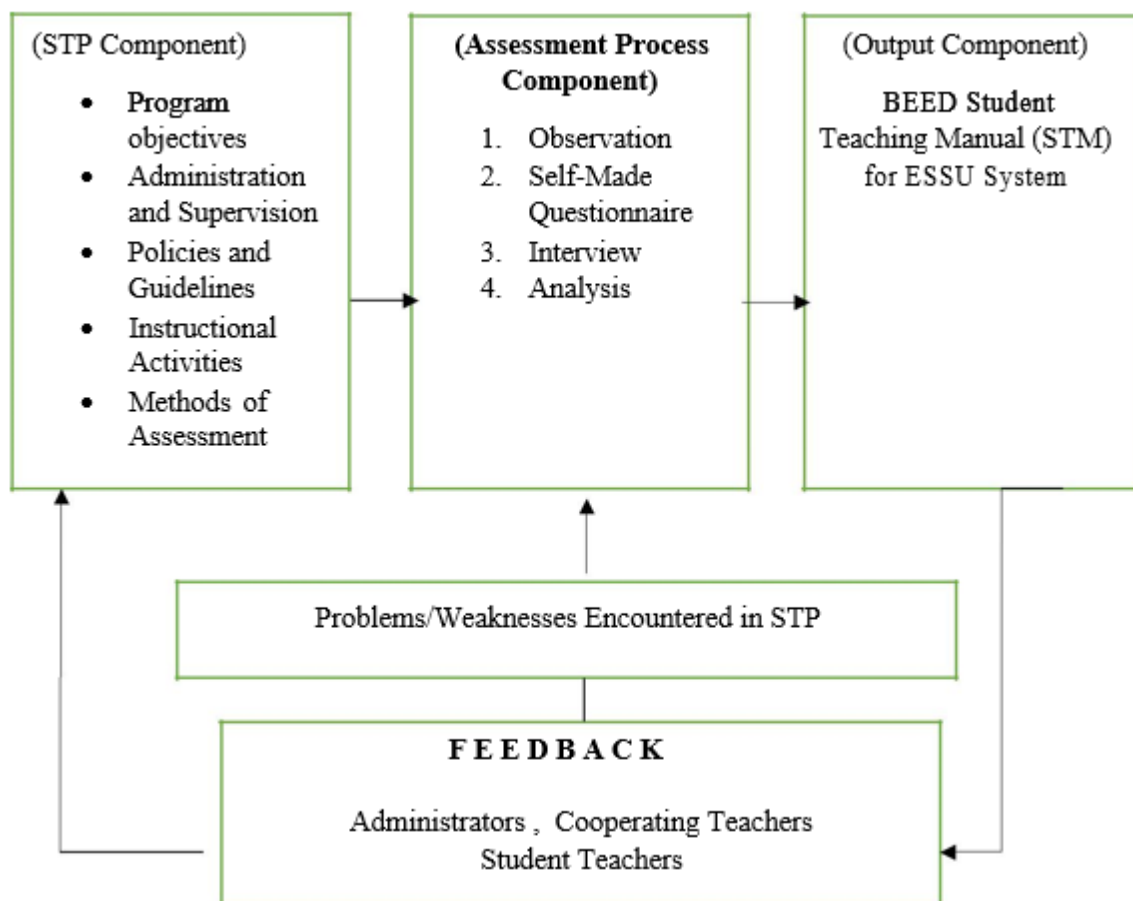
In support, Hernandez (2004) emphasized this definition by pointing out that this assessment model provides useful information for judging decision alternatives. Since assessment is a continuing and cyclic process, it must be implemented via system program.

Cognizant to the thrust of the present study an adaptation model from the CIPP model was deemed appropriate. The model has three processes that were used to show the relationships of the variables in the study, namely: Input, Process, and Product (IPP).

Input component involves the designed program of student teaching which comprised the research variables evaluated critically such as: program objectives, administration and supervision, policies and guidelines, instructional activities, and methods of assessment. Input component determines the available program designed of the student teaching and it provides information on how stakeholders employ resources to achieve program objectives.

On the other hand, process component is an on-going quality control monitoring of the program to identify any defects or flaws in the procedural design. This is used to determine the congruency between the planned and actual activities. From such evaluation, decision-makers obtain information they need to anticipate and overcome procedural difficulties and to make decisions.

Meanwhile, product component provides evaluation with the information that will enable the stakeholder to decide whether to continue, terminate, or modify the program. Figure 1, illustrates the conceptual framework of the study.



**Figure 1:** Research paradigm towards the development of a BEED Student Teaching Manual (STM) for ESSU System using the IPP model.

## Methodology

The study employed a descriptive method of research using normative survey technique to assess the Student Teaching Program of the BEED in Eastern Samar State University (ESS) System.

The study was descriptive since the researcher aimed at assessing the existing condition of the BEED Student Teaching Program at ESSU System. Knowledge of the existing condition is essential and requires standards of assessment. The researcher used this method to provide accurate observation and objective assessment that would arise from the data gathered. In support, Best & Khan (1998) explained that descriptive research is concerned with the analysis of the relationship between non-manipulated variables and the development of generalizations, principles or theories that extends its conclusion beyond the sample observed or variable tested.

Moreover, normative survey technique was employed in this study as it was concerned with ascertaining conditions which prevailed in group cases/variables chosen from the study. Normative survey is essentially a strategy or technique of quantitative description of the general characteristics of the group. Any study which establishes standards of what is prevalent is a normative survey technique (Villanueva, 2003). Descriptive research design was deemed appropriate since the study would gather information on the present day policies, procedures, activities and processes of the STP in the ESSU System.

Likewise, documentary analysis was also utilized to gather data on the profile of the BEED student teaching program, existing guidelines, syllabus and other pertinent documents needed in the study. Unstructured interview was used to supplement the data gathered through the self-made questionnaire.

The total number of stakeholders/respondents were 389 which were classified accordingly. From the total number of respondents, administrators (43 or 11%) who are the deans, program heads, STP supervisors and coordinators in the Department of Education who oversee the program, cooperating teachers (171 or 44%) from the elementary schools who provide the teaching experience to student teachers, and student teachers (175 or 45%) who are bonafide BEED college students enrolled in student teaching. These were the respondents utilized based on their availability and willingness to participate in the study. Furthermore, accessible respondents according to Best and Khan (1998) are the respondents who are readily available at the time of administration of research instrument.

The study made use of the following: descriptive statistics: Percentage. This was used to determine the profile of the status of Student Teaching Program. Mean was used to determine the objective assessment of the respondents on the status of STP in relation to its components. Moreover, this was utilized to identify the level effectiveness of STP implementation and the problems encountered by the respondents during the program as well as the level of seriousness of the problem/weaknesses of the problems. Ranking was used to identify the weaknesses of the program encountered by the stakeholders in relation to the STP components. The weaknesses identified will be addressed through new policies and guidelines which are to be incorporated towards the development Student Teaching Manual (STM) of the BEED in the ESSU System.

## **Results and Discussion**

The highlights of the study on the status of STP indicated that: ESSU – Main had more BEED student teachers enrolled in STP than in ESSU – Salcedo. ESSU – Main and ESSU – Salcedo had adequate number of cooperating teachers. Majority of the high performing schools in the Province of Eastern Samar were utilized as cooperating schools/laboratory schools. ESSU – Main had fewer number of student teaching supervisors while ESSU – Salcedo had just enough number of student teaching supervisors to monitor student teachers' performance. An ideal ratio was observed between cooperating teachers and student teachers in both campuses. The ratio of student teacher supervisor to student teacher in ESSU – Main was not proportionate as compared to the ratio of student teaching supervisor and student teacher in ESSU – Salcedo.

The assessment of the STP by its stakeholders in relation to its major components was evidently implemented. In particular, the administration had managed the STP evidently as they were supportive in the implementation of the program. The supervision of STP was implemented very evidently which was attributed to the cooperating teachers' competence in supervising student teachers' performance. STP was evidently governed by policies and guidelines which need to be added towards the development of STM to address the problems/weaknesses encountered by the stakeholders to improve the program. The instructional activities in the STP were evidently provided to student teachers to improve teaching competence. The methods of assessment were evidently set for the STP to assess Student Teacher's Performance.

Moreover, The level of effectiveness of STP in relation to its component was generally effective with a total mean of 4.14. As rated by the stakeholders, supervision was consistently ranked 1st with a total mean rating of 4.26 (Very Effective) and the other components were all rated effective. Program objectives were effective with a mean of 4.17, instructional activities with a mean of 4.15, administration, 4.01, policies and guidelines 4.08 and methods of assessment with a mean rating of 4.18. Despite the fact that majority of the components were effective except for supervision which was rated very effective, yet opportunities for improvement of the implementation of STP could still be explored.

The data on the level of effectiveness of STP in relation to its components are illustrated in Table 1.

**Table 1:** Level of Effectiveness of the BEED Student Teaching Program (STP) in Relation to its Components

Components	Administrators			Cooperating Teacher			Student Teachers					
	Mean	Rank	VI	Mean	Rank	VI	Mean	Rank	VI	Mean	Total Rank	VI
Program Objectives	4.45	3	VE	4.13	2	E	4.16	2.5	E	4.17	3	E
Administration	4.33	5	VE	3.92	6	E	4.02	6	E	4.01	6	E
Supervision	4.56	1	VE	4.28	1	VE	4.18	1	E	4.26	1	VE
Policies and Guidelines	4.16	6	E	4.04	5	E	4.10	5	E	4.08	5	E
Instructional Activities	4.42	4	VE	4.10	4	E	4.15	4	E	4.15	4	E
Methods of Assessment	4.50	2	VE	4.12	3	E	4.16	2.5	E	4.18	2	E
<b>Overall</b>	<b>4.39</b>		<b>VE</b>	<b>4.10</b>		<b>E</b>	<b>4.13</b>		<b>E</b>	<b>4.14</b>		<b>E</b>

**Legend:**

1.0- 1.80	Not Effective at All	(NEA)
1.81- 2.60	Effective to a Little Extent	(ELE)
2.61- 3.40	Effective to Some Extent	(ESE)
3.41- 4.20	Effective	(E)
4.21- 5.00	Very Effective	(VE)

Generally, the problems/weaknesses that had prevailed on program objectives which need to be looked into were the lack of dissemination of the STP objectives, lack of clarity in the statement of STP objectives, and lack of understanding of STP objectives among student teachers, cooperating teachers, and administration. The problems/weaknesses on administration were centered on the lack of in-service training for student teaching supervisors and cooperating teachers, no distinct office for student teaching in campus, and inability of STP administration to plan for a rich and practical program for student teaching.

The problems/weaknesses which were encountered by the stakeholders on supervision were insufficient number of supervisor's visit to cooperating schools and student teachers, lack of innovative supervisory approaches/techniques shown by cooperating teachers and student teaching supervisors, big number of student teachers handled by student teaching supervisors. The prevailing problems/weaknesses on policies and guidelines which need to be addressed in the proposed Student Teaching Manual (STM) were centered on the inconsistent implementation of some STP policies and guidelines, poor mechanism in the dissemination of STP policies and guidelines, and unwritten policies and guidelines.

The problems/weaknesses on instructional activities were centered on limited exposures of student teachers to seminars, for a and conference on innovative approaches to

teaching, insufficient number of hours spent for actual teaching in one's field of specialization, and inadequate time provided for observation in one's field of specialization/concentration.

The primary problems/weaknesses on methods of assessment which need to be resolved in the STP were the failure of the student teaching supervisors to observe due to some academic loads in the college, limited number of post-conferences with supervisors/cooperating teachers, and laxity supervisors/cooperating teachers to assess/evaluate student teaching performance.

After an objective analysis of the problems/weaknesses of the STP and in due considerations to the need of developing a Student Teaching Manual (STM), in h additional policies and guidelines are suggested to be contained in the said manual. Moreover, this manual will be very significant contribution to Eastern Samar State University (ESSU) and other Teacher Education Institutions (TEIs) in the Visayas Region.

## **Recommendations**

On the bases of the results and findings drawn from the study, the researcher offers the following recommendations:

1. ESSU through the College of Education/Teacher Education Department should sustain the collaboration and partnership with the Department of Education to elevate the status of the Student Teaching Program in the province.

2. Teacher Education Institutions (TEIs) in Eastern Samar/other places in the Visayas Region should likewise conduct periodic situational analysis in order to restructure student teaching program to cater to the specific needs of teachers in the locality.

3. ESSU Administrators in Student Teaching Program should revisit and restructure the major components of the STP in coordination with other stakeholders to address the identified problems and weaknesses in the study thereby incorporating new policies in the newly developed Student Teaching Manual

4. The ESSU System through the College of Education/Teacher Education Department to validate and recommend for the approval of the Board of Regents, the utilization of the newly developed BEED Student Teaching Manual which contains the additional STP policies and guidelines and other parts which are essential to improvement of STP.

5. The newly-developed STM for the Bachelor of Elementary Education in ESSU System be used to improve the Student Teaching Program

6. Researchers should conduct further studies relative to assessing and evaluating teacher preparation programs in the province/region

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# **The Community as Laboratory: A Proposed Model for Collaborative Materials Development in Mathematics through Community Engagement**

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## **Abstract**

Mathematics, as traditionally taught in Philippine schools, has always involved either culturally-free or culturally-foreign concepts, examples, and even methods. Teachers who are largely dependent on teaching and learning materials provided by concerned government agencies are limited by the examples provided in these instructional materials. Examples that are culturally-relevant for learners belonging to diverse communities are sparingly present in these materials. Thus, there is a glaring gap between in-school mathematics and the everyday-mathematics that learners use, need, and are constantly exposed to. Anchored on the theory of Social Constructivism and using the case of an island-community in Northeast Panay, this paper proposes a model for developing learning materials for an indigenous community. Dubbed CoLab (The Community as Laboratory), the model proposes community engagement as a means to collaboratively develop learning materials in mathematics. The paper begins by emphasizing the need to develop community-specific learning materials in mathematics and why a single agency or institution alone cannot efficiently handle this task. Then, the necessary members of a proposed collaborative group for such a project are identified. This is followed by an ideal manner by which the development process may be planned out. This development process involves preliminary planning, data gathering through ethnography methodologies, drafting the learning materials, and a method for evaluating these. All throughout the phases of this process, the importance of validating data with key collaborative group members from the community is emphasized. The learning materials thus developed with the use of the model can be rightfully considered as products of the community.

**Keywords:** Ethno Mathematics, Social Constructivism, Development of Learning Materials, Mathematics Education, Collaborative Materials Development, Contextual Learning

## Introduction

Contextualization is one of the facets of social constructivism, a learning theory which, in its many forms, has gained much traction in mathematics education over recent decades (Vygotsky, 1978; Bishop, 1988; Gonzalez, 1995; Brown, Collings, & Duguid, 1989; Sjoberg, 2007). According to the social constructivist theory, the processes of learning and understanding leading to human development are inherently social, and thus knowledge is constructed through cultural activities and by interacting with cultural tools (e.g., symbol systems, artifacts, language) (Palincsar, 1998). Consequently, mathematical learning may be viewed as a process of active construction that happens when learners engage in classroom mathematical practices, while being enculturated into mathematical practices of a wider social group (Cobb, 1994). These mathematical processes, among others, fall within one of the constructs borne out of social constructivism: ethnomathematics.

First coined by Brazilian mathematics educator Ubiratan D' Ambrosio in the 1970's, ethnomathematics was defined to be the mathematics which is practiced among identifiable cultural groups such as national-tribe societies, labor groups, children of certain age brackets and professional classes (D' Ambrosio, 1985). Over the years, the term has become more inclusive, now largely referring to the relationship between mathematics and culture (D' Ambrosio, 1999), or the way different cultural groups mathematize (e. g., count, locate, design, measure, relate, sort, compare, infer, hypothesize, problem pose, generalize, communicate, data gather and process, predict, analyze, record, evaluate, verify, and construct) (Vithal & Skovmose, 1997; Bishop, 1988; Gerdes, 1994; Ascher, 1991). A growing number of literature suggest that learning is better facilitated when classroom mathematical processes are anchored on these ethnomathematical elements within the learners' social context (Rosa & Orey, 2011; Adam, 2004; Achor, Imoko, & Uloko, 2009; Matang, 2008).

In 2012, the "Enhanced Basic Education Act of 2013" required all Philippine basic education schools to implement the K - 12 curriculum to provide sufficient time for Filipino students to master concepts, develop skills necessary for tertiary education or employment, and be specialized in their respective fields of interest. Notably, contextualization is one of the salient features of this new curriculum (Department of Education, 2013). As such, the Philippine government is now recognizing the need for the curriculum to be grounded in the context of peoples' community life, recognizing their own knowledge system and practices, and inclusive of their cultural perspectives.

These changes provide a welcome respite considering that mathematics, as traditionally taught in Philippine schools, has always involved either culturally-free or culturally-foreign concepts, examples, and even methods. Teachers who are largely dependent on teaching and learning materials provided by relevant government agencies are limited by the examples provided in these instructional materials. Examples that are culturally-relevant for learners belonging to diverse communities are sparingly present in these materials. Developers of these learning materials come from various contexts, and are oftentimes situated in the mainstream, and thus have a tendency to cater only to the mainstream culture. The disengagement from specific cultural communities has resulted in the absence of culture-specific concepts in these learning materials. Thus, there is a glaring gap between in-school mathematics and the everyday-mathematics that learners use, need, and are constantly exposed to.

This paper proposes a model for developing learning materials for a group of people which may be classified as a subculture or an indigenous community. Dubbed CoLab (The

Community as Laboratory), the model proposes community engagement as a means to collaboratively develop learning materials in mathematics.

## **The Need for Collaboration**

The constructivist framework advocates collaboration to facilitate the learning process (Sjoberg, 2007). Similarly, collaboration is an important aspect when employing the CoLab model in developing learning materials. Collaborative support is crucial to guarantee that ideas are exchanged, evaluated, and negotiated, in order to ensure the effectiveness of the learning materials and the efficiency of the development process.

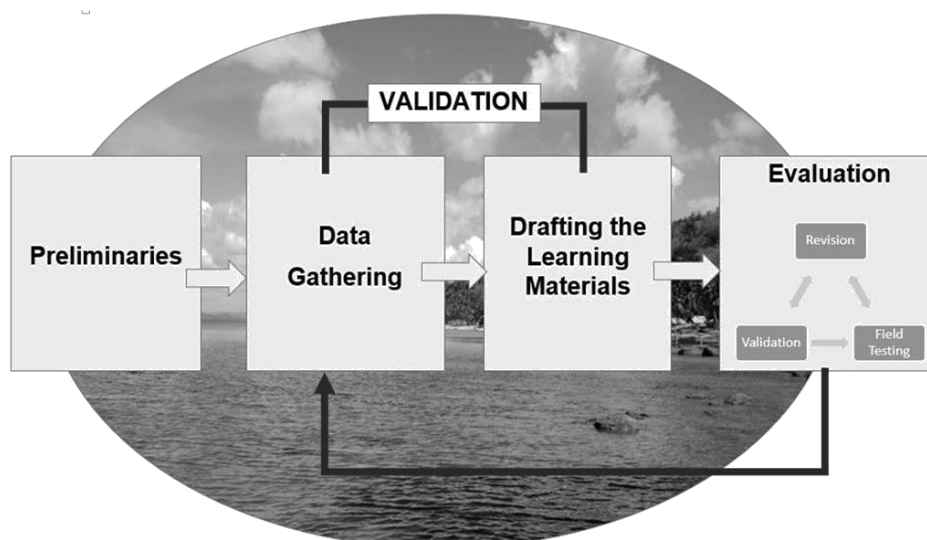
A collaborative group should be composed of various actors playing specific roles during the development process. These actors ensure that the learning materials being developed are sound in terms of mathematical content, appropriateness of language, and cultural suitability. As such, although the materials being developed are specific for mathematical topics, there is a need for collaboration among experts in the field of mathematics, social sciences, education, and the communication arts. Aside from collaboration among members of the academe, the participation and involvement of key community members are vital in facilitating engagement with the community. This facilitation is necessary especially since engaging the community has implications on the safety and resource management of the members of the collaborative group.

## **The Community**

The community where the proposed model in this paper was applied is a village located in an island in southeast Panay in the Philippines. The community's main sources of living are fishing and aquaculture. However, some members of the community are also involved in charcoal-making, boat-making, logging, and farming. The village is headed by the Barangay Captain, and is divided into four geographical divisions, and has an estimated number of 300 households. Because it is a mountainous and wooded island, people from the village have no means of travelling by land, except on foot. There is only one secondary level school in the island. The school is located in the village proper and is composed of a total of 7 sections (2 sections each for Grades 7 to 9, and 1 for Grade 10). As of school year 2015-2016, the school, headed by a school principal, has 250 official enrollees and twelve teachers, two of whom teach mathematics. Electrical energy in the community is provided by gasoline- and solar-powered generators.

## **The Development Process**

Figure 1 presents the key aspects of the CoLab model. It is relevant to note that almost all of the activities are to be done within the community. Moreover, it should be emphasized that coordination is very important in all the phases of the development process. Coordination starts from the beginning of the planning phase, and continues on until after the learning materials are completed, and are used by the community. Details for each phase in the development process, using specific examples from coastal community wherein this model was applied, are elaborated on in the following sections.



**Figure 1: The Community as Laboratory Model**

## Preliminaries

The initial planning that has to be made to conduct the development of learning materials is crucial. As emphasized earlier, collaboration is an important aspect of the development process. Thus, it is important to identify the members of the collaborative group during the preliminary phase. Table 1 reflects the ideal members of the collaborative group, and the roles that they need to play.

Members	Roles
Overall Coordinator (OC)	<p>The OC takes charge of managing the entire operation, ensuring that everyone involved is coordinated and clear about tasks and expected outputs.</p> <p>In the case of the island community in this study, the role of OC was played by the research adviser of a group of graduate students from a Teacher Education Institution (TEI) in the Philippines.</p>
More Knowledgeable Others from the Academe (AMKO)	<p>The AMKOs are members of the academe who are mainly designated to produce the learning materials. The main AMKOs are the ones who are knowledgeable about the mathematical content of the learning materials. Other AMKOs are educators in the field of mathematics, social studies, communication arts, and psychology who may be tasked to edit and validate the learning materials.</p> <p>In this study, the main AMKOs are the graduate students from the TEI assigned to produce the learning materials. These graduate students are required to submit a capstone project or study as part of the requirements of their Master of Education degree, and decided to develop learning modules in mathematics for their final output. Other AMKOs are mathematics, social studies, communication arts, and psychology professors from the TEI.</p>

Community Civic Leader/s (CCL)	<p>The CCLs are also known as the gatekeepers of the community. They are leaders by virtue of political or socio-economic intent. The involvement of CCLs is crucial in gaining the trust and participation of the members of the community. They can facilitate communication with CMKOs and ease the process of data gathering and validation.</p> <p>In this study, the barangay captain (village leader) was the main CCL with which the team coordinated. Other CCLs are the members of the village council.</p>
Community Education Leader/s (CEL)	<p>The CELs are the main point-persons in the school. Their involvement in the project ensures that activities conducted in the school are properly facilitated. This will also ensure the cooperation of the teachers and students of the school. The CELs may also be instrumental in getting the cooperation of learners' parents and even of the learners themselves.</p> <p>In this study, the school principal was the CEL that the team largely coordinated with. Other CELs are the mathematics teachers of the school.</p>
More Knowledgeable Others from the Community (CMKO)	<p>The CMKOs are experts in the various industries, traditions, and other local practices in the community. Much data validation is coordinated with them</p> <p>In this study, the CMKOs are the fishermen, homemakers, boat-builders, and traders.</p>
Learners' Parents / Guardians	<p>The learners' parents or guardians are required to provide their consent in allowing the learners to participate in the needs assessment and field testing of the learning materials.</p>
Learners	<p>The learners are crucial sources of information during the needs assessment and field testing phases of the development process.</p>

**Table 1: Members and Roles of the Collaborative Group.**

As soon as the members of the collaborative group are identified, plans for community engagement are made. Prior to physically engaging with the community, it is helpful to explore both online and print sources for information about the community. In addition, AMKOs who will be deployed in the community must be knowledgeable of ethnography methodologies and protocols. Since ethnography usually requires months to conduct, an initial visit to the community is suggested. This initial visit allows for the establishment of ties with the CCLs and CELs. During this visit, the OC and AMKOs may bring letters of introduction or other information that will ease entry, such as information about one's affiliation, funding sources, and planned length of time in the field. An initial meeting with the community leaders may also take place during this visit. Additionally, this visit may also allow the OC and AMKOs to conduct an initial needs assessment of the learning community.

It is also during this phase that the OC and AMKOs decide on the format and content of the learning materials. These decisions will be dependent on the pedagogical framework that will be employed by the team. Moreover, drawing up a timetable, which includes the schedule and frequency of collaborative group meetings for the entire project, is also beneficial. As such, it is also wise to already identify possible challenges in terms of time and resources.

In this study, the team was fortunate that the barangay captain and the school principal were spouses. Thus, coordinating with other members of the collaborative group from the community was made more efficient.

The OC and the deployed AMKOs conducted two pre-visits to the community. The first visit lasted for half a day, and was conducted to make formal introductions with the barangay captain and the school principal. An initial topographical scan of the community was also made during this first visit. In addition, the OC and AMKOs also had the opportunity to converse with the one of the school's mathematics teachers, and conduct an initial needs assessment based on the existing textbooks and status reports of the learners.

The second visit lasted for two days, with the OC and AMKOs spending the night in the community. It provided an opportunity for the team to familiarize themselves with the ways and length of time it would take to get from one place to another, the resources --- and their sources --- needed during the longer-term immersion, and the general conditions of the weather throughout the day. Initial linkages and connections with a number of CMKOs were likewise established during the two-day stay. Conversations with learners and their parents were initiated to provide them with more information about the reasons for the presence of the OC and AMKOs.

## **Data Gathering and Analysis**

After initial plans are set up, assigned AMKOs then go to the community for data gathering. Ethnography methods such as secondary data analysis, fieldwork, observation and participant observation, analysis of artefacts, focus group discussions, and informal and semi-structured interviewing are employed in order to identify practices, traditions, and objects that may provide means to contextualize the learning materials. The model suggests that transcriptions of audio and video recordings should also be done as soon as possible to provide for time to have these validated while still in the community. Ideally, ethnography should be done in a period of time that will allow the ethnographers to be immersed in the community for enough time to observe all the relevant seasonal activities.

In this study, the AMKOs were only able to conduct a 7-day long immersion in the community. Furthermore, they relied mostly on observation, fieldwork, and interviews. Because the supply of electricity was unstable, the team brought along a number of electronic gadgets and power banks to ensure that audio and video recordings will be facilitated during the week-long immersion. The team was provided a cottage to stay in, adjacent to the house of the barangay captain and school principal. The CCL and CEL were very instrumental in coordinating with other CCLs and CELs and greatly facilitated the team's activities within the community. The AMKOs engaged in fishing activities, household undertakings, and searching for marine resources. The CCL and CEL were very cautious in allowing the AMKOs to join activities in the open sea, especially at night, resulting to missed opportunities of actually experiencing the activities. The AMKOs also spent a considerable amount of time with the children of the community. In addition to asking them about schooling, domestic, and learning

concerns, the AMKOs also engaged the children in games and play. Summaries of data gathered were noted in the fieldwork journal, and were validated by CMKOs. Due to limitations in terms of power supply, audio and video recordings were transcribed outside the community after the immersion and were validated only by the AMKOs.

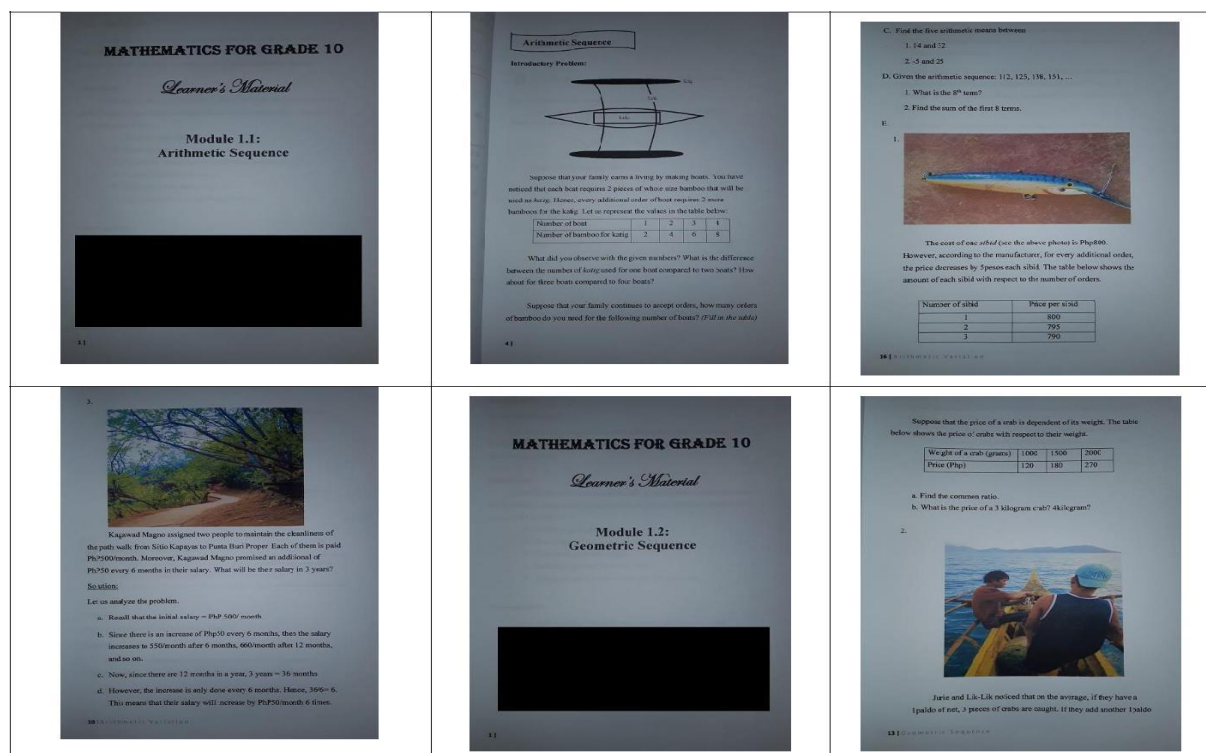
## Drafting the Learning Materials

After gathering and analyzing data, mathematics AMKOs can proceed to drafting the learning materials. The model proposes that learning materials be developed while in the community so that validation by CMKOs may be conducted.

In this study, mathematics AMKOs drafted their respective learning materials independently, while coordinating closely with the OC. The learning materials were drafted outside the community after the immersion and were validated only by the AMKOs prior to the first round of the Evaluation phase.

## Evaluation

When the draft of the learning materials is completed, these are evaluated by AMKOs and CMKOs and revised as needed. Then, the final draft is field tested to an appropriate group of learners belonging to the community. During the field testing, the AMKOs conduct a pretest along with initial interviews or surveys with the learners to provide baseline data on their cognitive and affective states. Throughout the use of the learning materials by the learners, audio and video recordings may be made. However, to avoid the artificial actions by AMKOs and learners, notes may be taken in place of video recordings. After learners are exposed to the learning materials, posttests, interviews, and surveys are



**Figure 2:** Samples of the Learning Materials Developed.

conducted to capture effects of, and reactions to, the learning materials. Based on these results, AMKOs may choose to either revise the learning materials (within the scope of the evaluation phase) or go back to data gathering and, consequently, the rest of the development process.

In this study, the initial drafts of the learning materials were validated by AMKOs. Then, the AMKOs went back to the community for the Evaluation period. The school's mathematics teachers were consulted about how the initial drafts of the learning materials may be improved. They offered suggestions on revising the spelling of some terms used, and also suggested more appropriate terms in place of the ones used by the AMKOs. After incorporating these changes, the final draft of the learning materials were provided to the learners. Relevant tests and interviews were conducted prior to, and after, exposure to the learning materials to gather relevant cognitive and affective information about the learners. In brief, the themes of the learners' reactions to the learning materials included: (a) vocabulary and comprehension analysis deficit; (b) limited time in the evaluation of the learning materials; (c) sense of connection with the examples; and, (d) the need for the teacher as scaffolder. With these information, AMKOs proceeded to revise the learning materials for a future round of evaluation. Figure 2 shows sample photos of the learning materials developed.

## **Conclusions, Implications, and Recommendations**

This paper proposes what is, at best, a model-in progress for a community-based development of learning materials in mathematics. Engaging community members and allowing More Knowledgeable Others from the Academe to immerse in community practices and day-to-day activities provides a strong background in ensuring the contextualization of the learning materials. Developers of learning materials are no longer just outsiders looking in but actual participants in performing relevant mathematical processes and are thus provided with better insights in the details that they intend to include in the learning materials. On the other hand, local learners do not feel alienated by the learning activities presented to them because the learning activities actually do involve their local spaces, practices, and traditions. The learning materials thus developed with the use of the model can be rightfully considered as products of the community.

An important caveat to applying this proposed model is the obvious differences among various subcultures or indigenous groups. The community for which this model was applied was considerably hospitable and welcoming of strangers. Moreover, a lot of elements of the mainstream culture are evident in the community, which proved facilitative of the development process. Applying the proposed model to a variety of subcultures and indigenous groups may lead to the necessary refinements of the model.

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# **The Life Quality and Social Development for the Strength Community of Donaranyick in Praksriracha District, Chainat Province**

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## **Abstract**

The purposes of this research were: 1) To study the life quality of society. 2) To prepare the community plan in developing the life quality of society and, 3) To prepare the action plan for the community plan in developing the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat. The purposive sampling was collected from a sample of 60 households by the community leaders. The data collection was conducted by interview, questionnaires and AIC technique. The data were analyzed by means of percentage, means and standard deviations. The results of the study were at very high level as follows: 1) The opportunity in the education and profession of youth. In the education system in Sankhaburi Amphoe was available from the kindergarten, the primary, the secondary as well as the university. 2) The physical development of the community. There are the electricity, the water supply, the road as well as the allocation of irrigation canals for the farmers. 3) The problem-solving of poverty. There are committee of the local sectors and the headmen have worked with the local community, the temple as well as the education institution (Chandrakasem Rajabhat Center). 4) The accessibility service of government. The decentralization with the local governance has worked with the district administration and the local government organizations. 5) The accessibility service of local and government sector. There are a lot of service to support the local community. 6) The participation in giving the opinion, "Yiam Ban Yam Yen", which is the community forum, is held to criticize and plan the community plan every year. In addition, 2) the result of community plan was followed up by the result of life quality and community problem. The first priority was "Purposive Ground Project" from in the village 7 and "Rice Drying Ground Project" from in the village 8. The action plan covers with the meeting, the public relation, as well as the elderly community activities. Furthermore, "Purposive Ground Project" and "Rice Drying Ground Project" open for the community members and Chandrakasem Rajabhat center and Arunyig temple. The level of satisfaction of the projects were at high level in every item.

**Keywords:** Development, The Life Quality, Society, Strength, Community Plan

## **Introduction**

In 2002, Chandrakasem Rajabhat University (Chainat Campus) occurred due to the use of public land in 500 hectares at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat and expand to campus of Chandrakasem Rajabhat University. On the other hand, the coordination of sectors found that the land was been by the public and established as the institution. At the same time, Mr. Araya Wiwatwanich, who was the former governor, supported to expand the educational opportunities with their needs of the local people. In Chainat, there were a lot of officers as well as people that wanted to study further in the undergraduate. Moreover, they accelerated the time to finish up in the graduation in order to adapt their career paths in the positions. Therefore, the governor wanted Chandrakasem

Rajabhat University found the suitable place to open the university so that the people did not decide to study very far from Chainat. Furthermore, it had the process of getting the ownership of the land . (Chandrakasem Rajabhat University ( Chainat Campus,2011).

While Chandrakasem Rajabhat University ( Chainat Campus) has already opened the university successfully and renovated the area. From the survey of 316 acres of the public, it found that 43 people invaded the land for their dwellings and use the area for farming. The committee was appointed by the marshal of Sankhaburi Amphoe from the Department of Public Sankhaburi agricultural land with the headman to evaluate the entire property. To pay compensation and move out the area, the total budget for payment was 89,000 bath. Pravost Sinpattanchai, the abbot of Sa Mai Daeng temple, was the associate dean and donated at Bank for Agriculture and Agricultural Cooperatives. After receiving the compensation and the demolition, most of invaders moved out of the area during October 2003- April 2004. Later, Chandrakasem Rajabhat University ( Chainat Campus) has established the rice farming community for farming in the three seasons.

From the survey of the problem around Chandrakasem Rajabhat University (Chainat Campus) it found that the conflict of the community as follows: 1) The people gathered on the grounds of the farm, but others did not. 2) The people could not take the right of the possessions in farming, and 3) The people saw the space area and invaded the tenure rights. Thus, these problems brought the conflict into the community. Even though the university took the action to clarify the area for the education, the conflict was still between the people in the community. Moreover, the lack of trust in the university and the government organizations occurred and the problem did not cooperate in the forum community and the meeting in the community (The chairman of Preakpattan, 2012 ).

Apart from these reasons, the researcher aims at the life quality And social development For the strength community Of Donaranyik in Praksriracha District, Chainat Province. This research will be able to reduce the conflicts of the community in moving from the land that occupied by incorrectly as well as the community understand their needs to develop the area surrounding the university as well as the government sectors.

In addition, this research aims how to teach the people in the community know the community plan by the cooperation in order to offer the budget with the private or government organizations and develop the community in the future.

## **Objective of this study**

1. To study the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.
2. To prepare the community plan in developing the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.
3. To prepare the action plan for the community plan in developing the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.

## **The Scope of Research**

### **1) The scope of population and sample groups**

The people live in Don Aranyik Community which is in village number 7 and 8 at Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat. The sample group was 60 households.

## **2) The scope of content**

This paper aims at the content of the life quality that it is divided into six sub- themes as follows:

- 1) The opportunity in the education and profession of youth.
- 2) The physical development of the community.
- 3) The problem-solving of poverty.
- 4) The accessibility service of government.
- 5) The accessibility service of local and government sector.
- 6) The participation in giving the opinion.

## **3) The scope of place**

Don Aranyik Community in village number 7 and 8, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.

## **Research Methodology**

### **Population and Sampling group**

The population in this study was community leaders, officers and people who lived at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat. In addition, the people were the group which moved their dwellings by the land law that was given into the university for the education as well as it was in charge of the headman and the chairman of the community in the village number 7 and 8 , Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat. There were 871 households and it had 3,622 people. ( The chairman of the community , 2012).

The sample group in this paper was the officers and people who lived at Don Aranyik Community and that moved their dwellings by the land law. It was given into the University for the Education. The headman and the chairman of the community in the village number 7 and 8 were responsible for the discussion. The focus group was composed of five groups, including seven people from two villages. It was selected by the community leaders with purposive sampling.

### **Instrumentation**

The instrumentation in this study was comprised of three items as follows:

1. The model of focus group discussion was about the life quality of society as follows: 1) The opportunity in the education and profession of youth. 2) The physical development of the community. 3) The problem-solving of poverty. 4) The accessibility service of government. 5) The accessibility service of local and government sector and , 6) The participation in giving the opinion.

2. The techniques of bamboo ladder measured the life quality during the past, the present and into the future.

3. The Project of Community Development Satisfaction Index

### **Data Collection**

1. To study and collect the secondary data as follows: the community plan, the qualitative data , the education , the environment , the economy, the role of the government sector in the community, the usefulness and the accessibility into the media as well as the appearance.

2. The focus group discussion was about the life quality of society with six sub-themes. In addition, the techniques of bamboo ladder was measured the life quality during the past, the present and into the future with the participants in the focus group discussion.

3. To review the results of the focus group discussion with the life quality development with the validity of the six sub-themes. The results of the focus group discussion were used as the primary data for developing in the community plan.

4. The implementation of the community development plan was issued by the community with the research team as the consultant in the operation and evaluate the satisfaction of the community plan.

5. To conclude the result of the research

### **Data Analysis**

1. In the descriptive statistics, the techniques of bamboo ladder and the project of community development satisfaction index were analyzed by Mean and standard deviation

In the content analysis, the content of the focus group discussion was interpreted and summed up with the objectives of the research by the typology and taxonomy that were used to classify and categorize the system with six sub-themes.

## **Results**

### **1. To study the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.**

In the focus group discussion, there were 69 people from the sample group (98.57%). It concluded as follows:

#### **1.1 The opportunity in the education and profession of youth**

In the past, the stage was at 5.95 and the stage in the present is at 7.66 .Moreover, the stage in the future will be at 8.90, respectively. In the education system in Sankhaburi Amphoe was available from the kindergarten, the primary, the secondary as well as the university than other districts. According to in the past, the educational opportunities and the financial status of the parents were few. Notwithstanding, the young people had the knowledge and the expertise of the professionals.

At present, the attitudes of the people emphasize on the education. The youth not only get the good education, but also focus on the indigenous wisdom. In the future, both the local and government sector will emphasize on the education at all levels in order to access the education easier. In addition, the young people have the opportunity to show their potentials for the increase competition.

#### **1.2 The physical development of the community.**

In the past, the stage was at 4.90 and the stage in the present is at 6.88 .Furthermore, the stage in the future will be at 8.90, respectively. In the currently, there is the infrastructure to facilitate the physical and more conducive to agriculture, respectively.

In the past, there was not only enough the infrastructure as well as it did not develop the electricity, the water supply and the road.

Nowadays, the development is more in particular the electricity, the water supply, the road as well as the allocation of irrigation canals. On the other hand, the areas of irrigation

especially the road cannot be implemented due to the dirt road near the irrigation canal. Furthermore, it cannot be answered from the sector, however; the people will expect the various developments in the future.

### **1.3 The problem-solving of poverty and build the strength for the community**

In the previous time, the level was at 5.95 and the level in the present is at 6.14. Besides, the level in the future will be at 7.80, respectively. The committee of the local sector and the headman has been the meeting with the local community, the temple as well as the education institution in developing the agriculture and the profession.

In the past, almost people were farmers therefore, they emphasized on the careers than the education. To access the capital of the occupation is less, however; the way of the rural community is very generous, solidarity and mutual assistance one another.

At present, there are a lot of the private and government sectors in developing the professions in the future. Moreover, it makes the chance in working and increases the revenue for the elderly people and reduces or relies on their grandchildren.

### **1.4 The inequitable practice by the state power**

In the previous time, the level was at 4.66 and the level in the present is at 7.00. Besides, the level in the future will be at 8.45, respectively. The decentralization with the local governance has worked with the district administration and the local government organizations. It can provide the service for the people with the fairness.

In the former, the accessibility of the public service with the government sector is less thus the people did not approach it. The current distributions of community service are more and listen to the demand of the community. Notwithstanding, the occupying of public area is by a lack of understanding and less the organizing community forums. In the future, it will be emphasize on the participation of the people in listening and problem-solving with their needs.

### **1.5 The accessibility service of local and government sector.**

In the past, the stage was at 3.33 and the stage in the present is at 7.71. Moreover, the stage in the future will be at 8.33, respectively. The decentralization with the local governance as well as the local and government organization serve the ubiquitous people.

In the former, the accessibility of the fringe benefits of the government organization was less due to the limited budget which included the medical fee and the allowance. However, at present almost people access the infrastructure is easier than the past, for instance, the electricity as well as the tap water. It excepts the irrigation canal for the water that is not enough for all areas. In the future, the importance of the decentralization with the local governance will be more in order to approach the various benefits to the people.

### **1.6 The participation in giving the opinion.**

In the previous time, the level was at 4.90 and the level in the present is at 6.28. Besides, the level in the future will be at 8.23, respectively. “Yiam Ban Yam Yen”, which is the community forum, is held to criticize and plan the community plan for the local people and the education institution including to develop the community plan.

In the former, the importance of the government's working was less. From this reason, the problem-solving of the problems did not respond the need of the community.

However, the chairman of the community propose the plan by a lack of the attend the meeting nowadays.

In the future, the advancement of the technology will access the communication between the government and people more convenient and will rebound the need of the community.

## **2. To prepare the community plan in developing the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.**

In the brainstorm of prepare the community plan is as follows:

In the village number 7 at Don Aranyik Community, the people initiate to prepare the community plan including five plans as follows: build the purposive ground project, the elderly activity, the benefit of the disadvantaged people , build the knowledge center as well as the knowledge management. Purposive Ground Project is gotten the most votes by the people.

In the village number 8, people offer the ten projects as follows; add budget for the elderly people, get the amount of the rice with unlimited , the roadwork, build the broadcast center, repair the rice drying ground project, attend the meeting with government officer, build the knowledge center and the clinic as well as the park. Rice Drying Ground Project is gotten the most votes.

For the project with the activity corporates with the researchers from Chandakasem Rajabhat University, , the community and Arunyik Temple in developing and selecting the community plan by using AIC technique.

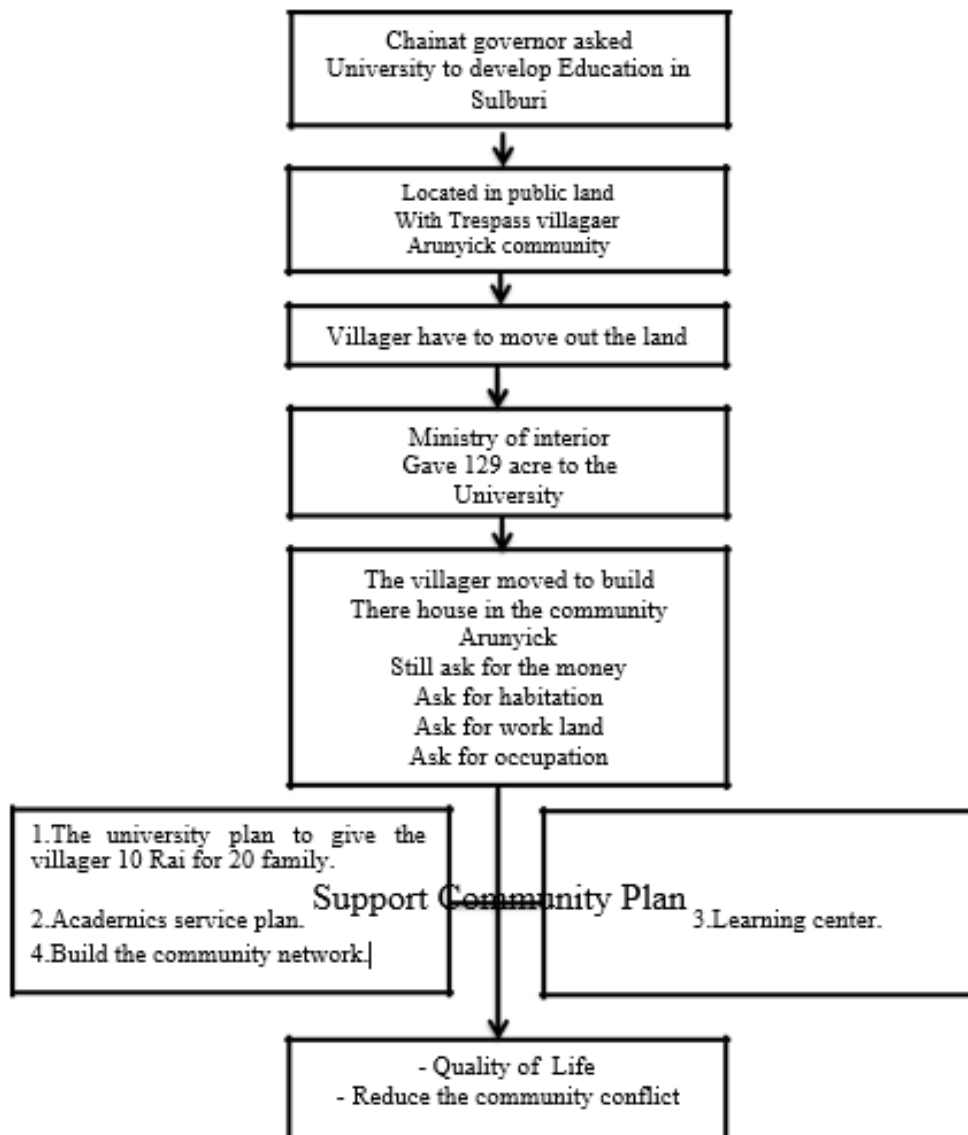
## **3.To prepare the action plan for the community plan in developing the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.**

### **3.1 Purposive Ground Project**

The ground has a width of one meter , a length of 15 meters and the roof has a height of three meters. The committee of the community, the headman, the chairman of the community and the people enforce this project together. The level of satisfaction of the project was at high to very high level.

### **3.2 Rice Drying Ground Project**

The rice drying ground project is operated by improving in particular the hole area into the smooth area for working. The ground has a width of 20 meters, a length of 20 meters . The level of satisfaction of the project was at high level .



**Figure 1:** The life quality And social development For the strength community

## Discussion

### 1. The findings of the life quality of the society of the community at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.

#### 1.1 The accessibility of the education and development of the youth

From the report, it found that in the education system in Sankhaburi Amphoe was available from the kindergarten, the primary, the secondary as well as the university. It is interesting to see that the largest number of people graduated from the primary school (57%), the secondary school (28%), the university (3%) as well as the non-formal graduation (0.5%). Furthermore, almost people were farmers, employees and merchandises. Even though the lifestyle of the people were farmers and the opportunity of the education was less, they still chose the lifestyle of the agriculture, employees and merchandises than the education.

Due to the fact that almost local people had enough the professions and revenues for their lives and the education in the university in particular the expenses were high, some local people lack of the enthusiasm to study further. Whilst the opportunity of the education in urban community was higher because of the high competitive rates and expenses. Therefore, the people selected the chance to work in order to get the high expense. Royal Thai Government Gazette (2007) further mentions that the right and the freedom in the education are not less than 12 years by the operation of the government that is no expense. The disable people and the poor must get the right and support from the government to get the equal education.

### **1.2 The physical development of the community.**

The communities left out from the public land .They got the compensation and bought the new one for build their dwellings near the irrigation canals and the commercial buildings. It equipped with the electricity system, the water pipe as well as the road that was more convenient than other communities. It is exempted that the village was near the irrigation canals that was necessary to improve the infrastructure in particular the road for the transportation. Department of Lands (2011) mentions that the public land means the land is operated by the government organization that is conserved for the people to use the appropriate land or the used land during the present or the past. By the law, the land is the public land for the citizen who use together. In addition, no people do not occupy for the advantage unless the people can be allowed by the officer.

### **1.3 The problem-solving of poverty and the strength of the community**

The agriculturists, who have their own lands, can make the income and buy the machines while others have not the income and they operate the cost to make the farm from being the village funds and getting the loans from the bank. In addition, some farmers has the additional professions, for instance, merchandise, agricultural processing as well as livestock. Thailand was the economic disparity country among the people that was rather high and was close to the countries in Latin America. On the contrary, the inequality of the income was rather being the big problem into the society. (Somchai et.al, 2005)

### **1.4 The inequitable practice by the state power**

The headman, the village headman as well as the chairman of the community is always selected by the people in the local politics to be the representative due to be familiar with the mayor. From this reason, they requested the project with their needs in the local community. If the representatives of the community differ to their point of views with the local politicians, they will not be the representatives of the community. In the social life, however, in the framework of Foucault, it means that the power relation is the networking opportunity and the possibility is done by something that is the complex process. It depends on the state of the society. ( Chairath, 2008)

### **1.5 The accessibility service of local and government sector**

The electricity as well as the tap water access into every households, yet it excepts the irrigation canal near the road that is not convenient for the people in the community. Furthermore, “Yiam Ban Yam Yen” is the project of the local hospital that is organized by the local community. It has the health and wellness project for the local community, in other words, there is the ground for working out for the people in the community.

In the framework of Maslow, therefore, Maslow’ Hierarchy of Needs Theory is divided into six themes as follows: 1) Physiological Needs 2) Safety Needs, 3) Love and belongingness Needs , 4) Esteem Needs and 5) Self Actualization Needs. (Sucha, 2003)

### **1.6 The participation in giving the opinion.**

The forum is held every year and the inspection is been from the community development officer. When the community requests the infrastructure, the officer considers the priority. Notwithstanding, it is not covered the budget because of using too much sum of money, thus, it does not respond and cover in every households.

In the framework of Amstein, however, the participation of the people in developing is consisted of eight components as follows : 1) Direct Manipulation , 2) Therapy , 3) Informing , 4) Consultation , 5) Placation , 6) Partnership , 7) Delegated Power and 8) Citizen Control ( Amstein, 1969 ) ( cited Parichar et.al ,2006)

### **2. The results of the action plan in developing the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.**

From the action plan in the village number 7, the ground is used the center for the community as follows: meeting, public relation, as well as the elderly community activities. In the previous time, the rice drying ground was useless because it was broken in the hole in the village number 8; thus, the local government used the rice drying ground for parking and the activity area. From the action plan , the community lacks the life quality of society and the community proposes the plan that is relevant to their needs of the community.

Anek et.al (2014) stated that the action research is the participatory research that mixes between the participatory research and the action research , including the qualitative research. In addition, to get the new knowledge and solve the problem occurs in the community, therefore, the researcher team , the community as well as the local people participate in the research process , for instance, plan , do , check and action by getting the learning process of the community , maintaining the people-centered development and solving the problem-learning process.

### **3. The action plan for the community plan in developing the life quality of society at Don Aranyik Community, Phraek Si Racha Tambon, Sankhaburi Amphoe, Chainat.**

From the action plan at Don Aranyik Community in the village 7 and 8, there are two projects for the community as follows: the purposive ground project and the rice drying ground project. These projects are cooperated by the local community, Chandrakasem Rajabhat University and Aranyik Temple. The conflict group, who moved from another land, are 43 people that the land is demolished, however; it gets the compensation for instance , getting jobs and planting area houses.

Moreover, the meeting is held by the rice community, the researcher from Chandrakasem Rajabhat University ( Chainat Campus) as well as the temple that have the activities as follows: the rice community, the action plan for the community, as well as the purposive ground project. Later, they cooperate the task together with Chandrakasem Rajabhat University ( Chainat Campus) and they constantly illustrate their projects as well as negotiate their understandings by the activity group. Therefore, the conflict decreases and contribute their understandings one another. In this activity, it not only develops the lack of the life quality ,but also cooperate the relationship among Chandrakasem Rajabhat University ( Chainat Campus), the community as well as the temple to acquire the understanding and the participation in order to be the strength community.

Prachasan (MPP.) stated that the community development is into the sustainable development , in other words, it opens the opportunity for the people and the representative of the organization in the local community participate and are responsible for determining in developing the community , deciding the future of the community as well as sharing the benefit together.

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# **Creative Business Store : From Local to Global . A Case Study of Community Enterprise of Antique Lamps from Pongyangkok Sub-District, Hangchat District, Lampang Province**

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## **Abstract**

The study of the creative business store: from local to global, a case study of, is an action research. The objective is to study the business of the community enterprise, which comes from local wisdom, for being the model of the student to be an entrepreneur. This project is a development study of the local wisdom in making antique lamps by collecting knowledge from participation process of the community, Lampang Rajabhat University, and local administration organization of Pongyangkok sub-district, Hangchat district, Lampang province.

The result of the study has two main points as follows: First, knowledge of a person and local wisdom combined with new business strategy can have value creation both for commercial enterprise and social enterprise. The way the community enterprise can live in competitive economic condition is how to gain knowledge of the community member. To develop the community enterprise to be self-sufficiency, it needs to study strengths and weaknesses, opportunity and threats of the community enterprise, to plan the business for the future and to raise the capability of the development with action research.

Second, the participation in the study, which participated by the student of community development, Faculty of Humanities and Social Science, the student of Management, Faculty of Management Science, had the knowledge exchange process in case of being the owner of the business, it was the simulation in the business of antique lamps starting from collecting data for being applied in the exhibition of The Thailand Research Fund (TRF) “Research : intelligence creative to develop the country, King Bhumibol Adulyadej, His Majesty In occasion Royal Celebrations around the 7 December 5, 2011, between 20-24 June 2012 at Impact Muangthongtani, Nontaburi province” that can result in the integration of the knowledge both in principle and action.

**Keywords:** Creative Business, Community Enterprise, Antique Lamps

## **Introduction**

The study of local wisdom in making antique lamps, a case study in Pongyangkok sub-district, Hangchat district, Lampang province, amalgamated the unique knowledge of individuals; production process combining both original wisdom and modern knowledge with the focus on handmade works and the use of local technology and material; the story of antique lamps retold through a legend which is a unique identity of the community. The study results encouraged knowledge exchange among the new generations and stimulated students’ learning process in connection with the multidisciplinary teaching and learning methods of

area development learning for ABC-PUS/MAG bachelor students. This research was expanded to the next study. It led to a creation of the business plan which urged students to creatively learn, develop and plan their business. This was considered as a foundation for students to received a direct experience from a business sector. The research included the boots set up by the students involved in the research in the exhibition of The Thailand Research Fund (TRF) “Research : intelligence creative to develop the country, King Bhumibol Adulyadej, His Majesty, in an occasion of the Royal Celebration around the 7 December 5, 2011, during 20-24 June 2012 at Impact Muangthongtani, Nonthaburi province.” Impact Muangthongtani is a social area in business and academic sector, as well as, a center for product exhibitions which open the door to international markets. The event comprised of national academic seminars, research exhibitions, and research presentation boots.

## **Objectives**

To study the local wisdom of community enterprises of antique lamps to develop students’ knowledge to being business entrepreneurs.

## **Research Tools & Methods**

This study was conducted by applying the fallowing methods as follows:

### **1. Identifying population and sampling**

The sample groups of this study were 1) a group of 7 members from the community enterprises of antique lamps in Pongyangkok sub-district, Hangchat district, Lampang province and 2) a group of 10 students including 5 students as shop entrepreneurs in which they were majoring in the community development field, Faculty of Humanities and Social Science and 5 students from the Faculty of Management Science.

### **2. Research Methodology**

Area Scope comprised of 3 areas as follows :

- 1) The geographical area of the community enterprises was village no. 5, Ban Ton Ka Muang Chum, the antique lamps center, in Pongyangkok sub-district, Hangchat district, Lampang province.
- 2) The business social area was setting up boots for doing business by the students at Impact Muangthongtani, Nontaburi province during 20-24 June in 2012.
- 3) The academic social area was processing and managing knowledge by a group of students from the process of community study and the antique lamps group; the results of studying community context; collecting and storing knowledge of making antique lamps; applying business knowledge, marketing, management through teaching and learning methods in the classroom to create a business plan and a business entrepreneur.

Content areas are as follows:

- 1) The local wisdom of the antique lamps community enterprises.
- 2) The way the antique lamps community enterprises do business for supporting the applied business plan created by the students.

### 3. Research Tools

- 1) Studying documents and other research studies related to the local wisdom and business plan; it was conducted by studying the collected documents for categorizing, grouping, and reviewing literature related.
- 2) Collecting the field work information was a form of community study in several aspects such as historical background, history of the antique lamps establishment, and business performance of the group.
- 3) Brainstorming among the small groups (Focus group) was a meeting held for analyzing business circumstances, marketing strategies, and business working plans of the group.
- 4) Conducting interviews and making observations for the main information givers such as the group's chairman, village head, community development officer, local youths, and educational institutions. This aimed to collect the information about the process of cooperation, support, or obstacles of the local wisdom and the enterprise groups within the community.
- 5) Using an observation record form for data collection which helps the researcher analyze the student's learning.
- 6) The use of electronic devices such as a camera and a sound recorder in order to take photos and record sound for further understanding and analyzing data in some cases.

### 4. Data Collection

- 1) Studied documents and basic information with regard to making the antique lamps and writing a business plan.
- 2) Collected information from doing the field work in order to gain data involving physical, cultural, and social contexts of the community.
- 3) Performed in-depth interviews to gain historical information of the community including the origin, stories, and production process through interviewing the key persons such as the chairman of the antique lamps enterprises, the villagers' leaders, and the community development office.
- 4) Applied the SWOT analysis of the antique lamps community enterprises and used it for writing a business plan and being an entrepreneur.
- 5) Created workshops about writing a business plan and being an entrepreneur.

### 5. Data Analysis

The section was performed by applying the information collected from the sample groups through analyzing, interpreting, and describing the relationship interconnected in several aspects, in which this included finding a conclusion from the whole picture and some differences by using descriptive analysis.

## Results

The story of antique lamps in the community was retold through the legend entitled "Tamnan Nanthipchang" of Pongyangkok sub-district, Hangchat district, Lampang province during 1729-1732. In other words, the process of making antique lamps was found in the era of the Thipchang lord who originally was a capable hunter. He was intelligent, talented, and good at using arms to fight against Burmese soldiers. Once it was retold that Nanthipchang

used a lamp as a trick to lure the enemies to enter his area for finding a place to light the lamp. After that Nanthipchang and his followers hiding in the darkness attacked the enemies until they withdrew. As a result, antique lamps are products of the community wisdom implying historical significance of the community as well.

The holistic knowledge of making antique lamps is divided into several parts such as material usage, production process, marketing, and networking.

**Material:** Teak wood is used as a major material and considered as a unique identity which makes products of the community stand out from the other communities.

**Production process:** The antique lamps are designed to be convenient for household using; the use of vegetable oil as a fuel represents not only living simplicity but also caring and responsibility towards community environment.

**Marketing:** Selling products in community area create jobs and bring incomes to people in the community. People also live the normal life in compliance with the philosophy of sufficient economy.

**Networking:** The group of antique lamps producers does not solely rely on help from the government, however, they create a network and gather people who are in the same careers to work together and exchange the knowledge among the group. The concrete data seriously collected from the group is expanded to society through online channels such as websites and online medias by young heirs of the group. (Figure 1)

Currently, global warming campaigns are continuously increasing as seen from many products in the market which has eco-friendly features. This trend encourages customers to purchase environmental-caring products more and more. With this popularity and change of trend, students as entrepreneurs have developed the idea to create a shop in response to the spotted opportunity.

By writing a business plan, it is found that the market shares which are considered from types of the products can be divided into antique lamps and replacement products. The antique lamps shop will focus on selling products to many groups such as tourists, the hotel, and resort entrepreneurs, decreasing global warming supporters, women and men aged between 40 – 50 years, in which this group of customers has the power to buy the products. This group is considered as a target group according to the idea of the business which will bring valuable to running the business.

According to the analysis of business circumstances, results including strengths, weaknesses, opportunities, and threats are shown in Table 1.

**Table 1:** Show SWOT analysis.

Strength	Weakness
<ol style="list-style-type: none"> <li>1. Uniqueness of products</li> <li>2. Flow budget</li> <li>3. Handmade products</li> <li>4. Cooperative and strong business</li> </ol>	<ol style="list-style-type: none"> <li>1. Being a business that can easily copied</li> <li>2. Limitation of specific product distribution areas or relying on other people</li> </ol>
Opportunity	Threats
<ol style="list-style-type: none"> <li>1. Having quality materials in their own area</li> <li>2. Popularity of products that can reduce global warming</li> <li>3. No antique lamps shop found in the business group</li> <li>4. Working participants often purchase the products for household usage and giving them as souvenirs in which this is another opportunity.</li> </ol>	<ol style="list-style-type: none"> <li>1. Some components of antique lamps can be replaced by other materials.</li> <li>2. Lamps, lanterns (electronics ) are commonly sold in markets.</li> <li>3. Cost of changing the shop is low, so customers can easily change their minds and purchase other kinds of products.</li> <li>4. The products are only popular among a specific group.</li> </ol>

The marketing components are divided into product design, brand creation, pricing, and distribution channel. Product design: The products are designed in 3 sizes such as small, medium and large. (Figure 2) Brand creation: The brand “Antique Lamps” is emphasized. Pricing will be considered from cost which should provide benefits per unit, cover the working expenses and give valuable returns for the investment. Distribution channels: The distribution center is located at Alumpang Hotel Building, Lampang Rajabhat University. The marketing support channels will focus on making direct communication with the target customers such as advertisement via medias, public radio, local newspapers and presentation posters.

Since the antique lamps shops sell trading goods, product planning, and the working process will focus on purchasing and controlling which mean a preparation for continuous sales of antique lamps. In order to allow convenience for managing the antique lamps shops, the human resource management section will specify positions and duties according to the business specialty of each staff by considering the amount of shares and capabilities. (Figure 3)



**Figure 1:** People in the community participated in the research process.



**Figure 2:** The Antique Lamps were ready for selling.



**Figure 3:** The students were entrepreneurs in the Antique Lamps Shop.

## Results and Discussion

Results of the present study in terms of community-based economy conform with the work of Sangsit Piriyaangsan (2003) which indicates that the process of creating market economy system for community and state requires a more important role of several factors such as building incomes; working capital for the community; sharing marketing news; researching and improving suitable technologies for the community's business; creating workshops and seminars about management, planning, accounting, etc.; supporting local people in the community to create their own organization and build a learning network of production, investment and marketing of the community, in which, these factors should focus on encouraging people in the community to be independent and able to make decisions on their own. Furthermore in terms of the business plan, the results also support ideas presented in Ratchakrit Klongpayaban's work (2007); he describes that many entrepreneurs lack understanding of the real meaning of business plan. They likely to consider or pay attention to physical data such as documents or reports which contain various information categorized into different business projects, topics, and structures. As they assume that filling up the information required by the documents is equal to making a full business plan, the entrepreneurs just focus on adding information to the forms without realizing about the real meaning, key objectives, and effective usage of a business plan. Therefore, it is significant for the study of a community-based economy that originates from wisdom knowledge of each community to rely on supporting groups and networks including academic, government and private sectors in order to develop their success from the ground of family to community and internationality.

## Conclusion

1. The process of making antique lamps is systematic as it involves the original knowledge wisdom combining with modern knowledge. The local wisdom of making antique lamps comprises of skillful workmanship and separating work. Without relying on high technology production, normal equipment with multi-purpose functions is generally used to make the lamps. Furthermore, resources in the community are brought into the production process in order to preserve the originality more than focusing on the business excessive production. There are two levels of the wisdom transferring process which is personal and community levels. Firstly, the personal level, persons who act as transferees are family members and relatives; these people will transfer their knowledge of making antique lamps by teaching , explaining methods, allowing the learners to practice, and relying on gradually social absorption. In addition, real equipment is introduced to the learning process as well as informal ideas exchange and asking questions are well supported. For the content, it is about production process and natural material selection, Secondly, the community level, persons who act as transferees are a group of elders in the community. They will informally share their knowledge with youths, the heirs of antique lamps business owners, and other people who are interested in the business in order to create new entrepreneurs.

2. The study of local wisdom knowledge of making antique lamps for development of students' learning has results as follows:

- 1) Morality and ethic: the students are able to act morally and ethically with taking responsibility for themselves and others and adjust their ways of life well.
- 2) Knowledge: the students are able to understand; think; present data; analyze and identify facts in theories and other processes, and learn by themselves including modern knowledge and Thai wisdom knowledge.
- 3) Intelligent skill: the students are able to analyze situations and use their knowledge including conceptualization, theories, and other methods to solve unexpected problems.
- 4) Skills of individual relationship and responsibility: the students are able to work as a team which shows leadership, responsibility for themselves and society, and the ability to plan and take responsibility for their learning.
- 5) Skills of numeral analysis, communication, and technology usage: the students are able to communicate in terms of speaking, writing, and using information technology.

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# Framework of Collaboration of Disaster Risk Reduction Stakeholders towards Resilient Communities

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## Abstract

The paper systematically documents and analyzes the results of the A-PAD initiatives. It generally aims to develop a framework of collaboration, cooperation, and resources sharing among the community stakeholders involved with delivering emergency response and early recovery services, undertaking projects for disaster risk reduction, rehabilitation, and addressing the vulnerabilities of people and communities. It specifically aims to: (1) identify disaster risks and reduction management programs and initiatives among community stakeholders: the business sector, civil society organizations, local government units, media, and the academe; (2) determine difficulties encountered by the stakeholders in implementing DRR programs; and (3) develop a framework of collaboration and cooperation among the DRR community stakeholders in delivering effective and efficient disaster response. This study employed PAR and mainly involved active engagement of community stakeholders – heads or legal representatives of organizations - as the participants of the study. The study concludes that: (1) DRR stakeholders have developed and implemented DRR programs and initiatives with their distinct roles and expertise but coordination is still lacking between stakeholders. The government is more advanced in resources and network and linkages. The civil society organizations have more developed DRR programs for the communities. The business sector has more resources but lacks a fully developed DRR programs. The academe specializes in educating and providing DRR capacity building. The media specializes in providing timely information on DRR; (2) The perceived major difficulties in the implementation of DRR programs are: 1) the need to harmonize plans, policies, and strategies; 2) farmers and small businesses lack concrete DRR plans; and (3) The DRR stakeholders have identified specific areas of collaboration for sharing and mobilizing their resources, expertise, and information for various DRR activities. The areas of collaboration are focused on building a function DRR alliance network, particularly for priority sectors such as farmers and small businessmen.

**Keywords:** Collaboration, Disaster Risk, Stakeholders, Communities

## Introduction

The Philippines is vulnerable to various natural calamities and disasters. In the 2015 Report of the United Nations Office for Disaster Risk Reduction (UNISDR), the country is ranked 4th in the world among countries with the highest number of disasters from 1995-2015.<sup>1</sup> The magnitude and effects of calamities and disasters are further intensified by climate change. Researches have suggested that climate change could make storms stronger and more frequent.<sup>2</sup> Global warming leads seawater to evaporate more quickly, forming clouds that fuel storms, putting us in the path of many storms as the country is situated in the Western Pacific Ocean.<sup>3</sup> One of the recent strongest typhoons that hit the Philippines was typhoon *Yolanda* (*Haiyan*), responsible for 6,300 lost lives, over four million displaced Filipinos, and two billion

dollars in damages in terms of properties, infrastructure, and livelihood.<sup>4</sup> Thus, natural calamities are inevitable realities that call for various community stakeholders from private and government sectors to join hands in developing and implementing proactive response.

It is in this context that Asia Pacific Alliance for Disaster Management (A-PAD) aims to develop national platforms in the Philippines that would facilitate cooperation among public, private, and civil society sectors for national disasters. One of the pilot areas for developing a cluster platform of cooperation is the Luzon area, specifically the Bicol Region. There are two major big cities in the Bicol Region: Naga City in the Province of Camarines Sur and Legazpi City in the Province of Albay. A series of consultations and workshops among community stakeholders consisting of private institutions, public agencies, and civil society were conducted in the City of Naga and in the City of Legazpi.

The paper intends to systematically *document* and provide *analysis* the results of the initiatives of A-PAD. It generally aims to develop a framework of collaboration, cooperation in various efforts, and sharing of resources among the community stakeholders in delivering emergency response and early recovery services and in undertaking projects for disaster risk reduction, rehabilitation, and addressing the vulnerabilities of people and communities. It specifically aims to:

Identify various disaster risk and reduction management (DRRM) programs and initiatives among community stakeholders: the business sector, civil society organizations, local government units, media, and the academe;

Determine difficulties encountered by the community stakeholders in implementing DRR programs; and

Develop a framework of collaboration and cooperation among the DRR community stakeholders in delivering effective and efficient disaster response.

## Methods

This study employed participatory action research (PAR). It involved mainly the active engagement of the community stakeholders as the participants of the study, who are primarily the heads or legal representatives of the organizations. The participants were selected through convenient sampling. The details of the participants of the study are shown in Table 1:

**Table 1:** Participants of the Study

Community Stakeholders	Number of Respondents
1. Business Sector	10
2. Civil Society Organizations	4
3. Local Government Unit	2
4. Media	7
5. Academe	6

The qualitative approach was utilized in gathering the data taken from the stakeholders' forum and synergy workshops. The results were validated through the conduct of survey

questionnaire. The interpretation of the data was through quantitative approach for objectives 1 and 2 of the study using simple statistical tools: frequency count and rank. For objective 3, the study employed qualitative approach in order to develop a framework of cooperation. The framework was developed by integrating the results in the 1) coding of meaning given the notes and texts in the stakeholders' forum and synergy workshops and 2) the results of the survey. The study employs CIPP Model (Context-Input-Process-Product Model) for the documentation and analysis towards articulation of the framework of collaboration among the stakeholders.

## Results and Discussion

### A. DRRM Programs and Initiatives of Community Stakeholders

The following are the results of the consolidated DRRM programs and initiatives of the various community stakeholders.

#### A.1 Business Sector

These results were derived from the responses of the heads and representatives of various business entities and organized business groups in Legazpi City and Naga City during the forum, workshop, and survey.

**Table 2:** Programs and Initiatives of Business Sector on DRRM

DRRM Programs and Initiatives	Frequency	Rank
Small and Medium Enterprises have defined DRRM programs through their Corporate Social Responsibilities Entities	2	3
Micro Enterprises have no structured DRRM Programs but they support post-disaster activities (e.g. donating goods and cash for relief operations)	8	2
Increasing the level of DRRM awareness of their employees (e.g. fire and earthquake drills)	10	1

Table 2 shows that the majority of the business entities have limited DRRM programs. All business entities have their DRRM activities concentrated in increasing the level of DRRM awareness of their employees (Rank 1). This includes trainings and seminars on fire and earthquake drills. They provide information and drill simulation of their employees on how to protect them and their clients in the event of disaster, which are basically mandatory requirements imposed by various business regulatory agencies in order for them to renew their business permits.

Majority of the business entities have micro enterprises which have no structured DRRM programs but they support post-disaster activities (Rank 2). These post-disaster activities include provision of donation in kind or cash for disaster relief operations. This indicates that majority of the business entities are willing and active in extending assistance during disaster.

However, business entities that have well-defined programs on DRRM through their Corporate Social Responsibility unit/organization are very minimal (Rank 3). These

businesses have allotted resources and have organized structured system in developing and implementing DRRM programs. Their programs cover the conduct of capacity building for DRRM in selected communities, support activities on DRRM in the community level, and advocate the DRRM awareness to their client and employees.

The data indicate that the business sector, insofar as DRRM is concerned, is only focused on the awareness and information dissemination and has not optimized their resources in developing DRRM programs.

## A.2 Civil Society Organizations

The civil society organizations consist of NGO's from religious group and non-partisan group in Legazpi City. Below are their consolidated DRRM programs and initiatives:

**Table 3:** DRRM Programs and Initiative of CSO's

DRRM Programs/Initiatives	Frequency	Rank
Focal Program focused on DRRM	1	3
DRRM Programs are Implemented with a Community-based approach	2	2
DRRM Capacity building and establishing disaster-resilient communities	4	1

Table 3 shows that all Civil Society Organizations have strong programs on DRRM capacity building and establishing disaster-resilient communities (Rank 1). This implies that CSO's major program is focused on raising the level of awareness on DRRM of marginalized sectors in the community. This is towards forming them to be proactive in various natural and man-made disasters.

Programs on DRRM implemented with community-based approach ranked 2. This shows that only few CSO's have developed and implemented the programs through participation of the community and managed by them. However, only one CSO with DRRM as their main program. The existence and mandate of their organization is mainly on DRRM.

The data manifest the level and approach of civil society organizations relative to DRRM programs and activities. These organizations are propelled to establish disaster-resilient communities by way of capacity building using community-based approach.

## A.3 Academe

The academe consists of the state universities, private colleges, and technical/vocational schools in Camarines Sur and Albay provinces. Below are the results of the consolidated DRRM programs of the academe:

**Table 4:** DRRM Programs of Academe

Programs/Initiatives	Frequency	Rank
DRRM is integrated in instruction	6	1
DRRM is integrated in research	2	3
DRRM is integrated in community extension	3	2

Table 4 shows the DRRM programs of academe are integrated in their mandated functions namely instruction, research, and community extension. All academic institutions have integrated DRRM program in instruction (Rank 1). Some of the syllabi of the various degree programs have incorporated and articulated the values in caring and protecting the environment, climate change, and DRRM. Disaster Risk Reduction Management is clearly stated in the syllabi of some of the social sciences subjects.

Disaster Risk Reduction Management is also integrated in community extension programs/projects of the academe (Rank 2). It is implemented through various trainings and seminars to the communities adapted by the universities or colleges. It is integrated in research projects/programs (Rank 3). Universities have clear research agenda that are focused on, connected, and related in DRRM. They have conducted various research projects and programs focused on strengthening climate change adaptation.

The data clearly show that the academe is giving effort in the inclusion of DRRM to the trifocal function of these schools. There is a need, however, to integrate instruction, research, and extension in comprehensive programs for DRRM.

#### A.4 Media

The media sector consists of print and radio. Below are the identified programs and initiatives of the media sector during the forum and synergy workshop:

**Table 5:** Programs and Initiatives of Media

Programs and Initiatives	Frequency	Rank
Provides information on precautionary measures prior to calamity	7	1
Timely information dissemination during disasters	3	3
Appeal for help for the victims from other sectors during rehabilitation	5	2

Table 5 shows the DRRM programs and initiatives of the media in the Bicol Region. All of them provide information on precautionary measures prior to calamity (Rank 1). This shows that the major role of media in information dissemination is usually seen before the disaster itself. The accuracy of the information is crucial. Appeal for help for victims from other sectors during rehabilitation is ranked 2 as one of the initiatives of the media sector. This is carried out commonly by radio stations. However, only three radio stations can sustain their broadcast during the disaster. This is commonly done by the AM stations, particularly those that actually have the technical capacity and equipment to maintain their signals during typhoons. This implies most of the stations need more resources and increase their capability

to carry out their services during disaster coverage. Pooling of resources (i.e. manpower, technical, etcetera) is one of the suggestions to strengthen such capability.

#### A.5 Local Government Units

The local government units consist of Naga City and Legazpi City. Below are the identified common DRRM programs and initiatives of these two local government units:

Categories	Programs and Initiatives
Disaster Preparedness and Mitigation	<ul style="list-style-type: none"> <li>- Municipality level has DRRM program; DRRM Council</li> <li>- Resource Mapping; Response Training</li> <li>- DRRM Manuals, protocol</li> <li>- Advocacy building in barangays</li> <li>- Risk assessment; Early Warning Systems</li> <li>- Implementation of environmental ordinances</li> </ul>
Disaster Emergency Response and Rehabilitation	<ul style="list-style-type: none"> <li>- Close linkages with PNP, BFP, and Red Cross</li> <li>- Relief Operations; Rehabilitation projects and programs</li> </ul>

Table 6 shows that the LGU's have various DRRM programs from disaster preparedness and mitigation (DPM) to disaster emergency response rehabilitation (DERP) and they have the resources for these programs.

The Disaster Preparedness and Mitigation (DPM) consists of: 1) the existing DRRM Program at the municipality level through its DRRM Council; 2) conducting resource mapping and emergency response training; 3) implementing various DRRM activities guided by DRRM manuals and protocol; 4) providing DRRM advocacy in barangay level; 5) conducting risk assessment; 6) providing early warning system; and 7) implementing various ordinance to protect and preserve the environment.

The Disaster Emergency Response and Rehabilitation (DERR) consists of: 1) conducting immediate disaster response through its close linkages with PNP, Bureau of Fire and Protection, and Red Cross; 2) conducting relief operations; and 3) implementing rehabilitation projects and programs.

The data show that the LGU's have DRRM programs and capacities and that they have the resources for implementation. They need, though, more linkages and partnerships to effectively implement these programs and activities.

#### B. Perceived Difficulties Encountered in the Implementation of the DRRM Programs

Below are the perceived difficulties in the implementation of DRRM programs by the various stakeholders. Difficulties are areas in implementation of DRRM programs that are hard to accomplish or deal with.

Table 7 shows that 'the need to harmonize existing DRR policies, programs, and stakeholders adopted by various community stakeholders (Business Sector, Civil Society

Organizations, Academe, Media, and Local Government Units)' is ranked 1 among the challenges encountered by stakeholders in the implementation of DRRM. This implies that community stakeholders have initiated policies and programs for DRRM in their respective organizations. Moreover, they have recognized the importance of sharing and complementing their resources, efforts, and expertise in implementing DRRM programs.

**Table 7:** Difficulties Encountered by the Community Stakeholders in the Implementation of DRRM Programs

Difficulties	Frequency					Total	Rank
	Business Sector	Civil Society Orgs	Academe	Media	LGU		
Lack of plans for farmers and small entrepreneurs case of disaster	7	2	-	-	1	10	2
Relief operations are being Hampered by too much politicking	1	1	-	3	2	7	5.5
Need to harmonize existing DRR policies, programs and strategies adopted by various community stake holders	2	2	4	1	2	11	1
Need to define the roles of DRR community stakeholders, most specially the business sector	3	3	1	-	-	7	5.5
Need to underscore the important role of NGOs, CSOs and the business sector in the institutional level arrangements under the gamut of DMF	4	3	-	-	1	8	4
Need to integrate in the Micro and Small Medium Enterprises (MSMEs), business models and practices, disaster risk management via disaster risk-informed investments with particular focus on business continuity plans	6	1	1	-	1	9	3

'Lack of plans for farmers and small entrepreneurs in case of disaster' is ranked 2 among the challenges in the implementation of DRRM programs. Farmers and small

entrepreneurs are the largest population in the community. However, they have no concrete plans in preparing themselves in various disasters and mitigating their effects.

The specific challenge for the entrepreneurs is the need to develop business models integrating disaster risk management via disaster risk-informed investment with particular focus on business continuity plans (Rank 3).

‘The need to underscore the important role of NGOs/CSOs and the business sector in the institutional arrangements under the whole gamut of Disaster Management Framework’ is ranked 4 as one the challenges in the implementation of DRRM program. Non-Government Organizations have its role in organizing the community-based DRRM Programs. The business sector, on the other hand, has its role in providing resources for these programs. The role of NGO and business sector needs to be highlighted in order to implement comprehensive DRRM program. Likewise, Disaster Preparedness Plan must have “vertical coordination” at the national government and “horizontal coordination” between national and local authorities as well as with the support from NGO’s.

‘Relief operations are being hampered by too much politicking’ and ‘the need to define roles of each of the DRR community stakeholders, most specially the business sector,’ are both ranked the lowest as challenges in the implementation of DRRM programs. In order to facilitate actual DRRM activities, guidelines have to be devised and strictly followed in order to avoid politicking and scope and limits of roles and positions of every stakeholder have to be clearly understood and observed.

#### C. Framework of Collaboration among Various Sectors in Delivering Effective and Efficient Disaster Assistance

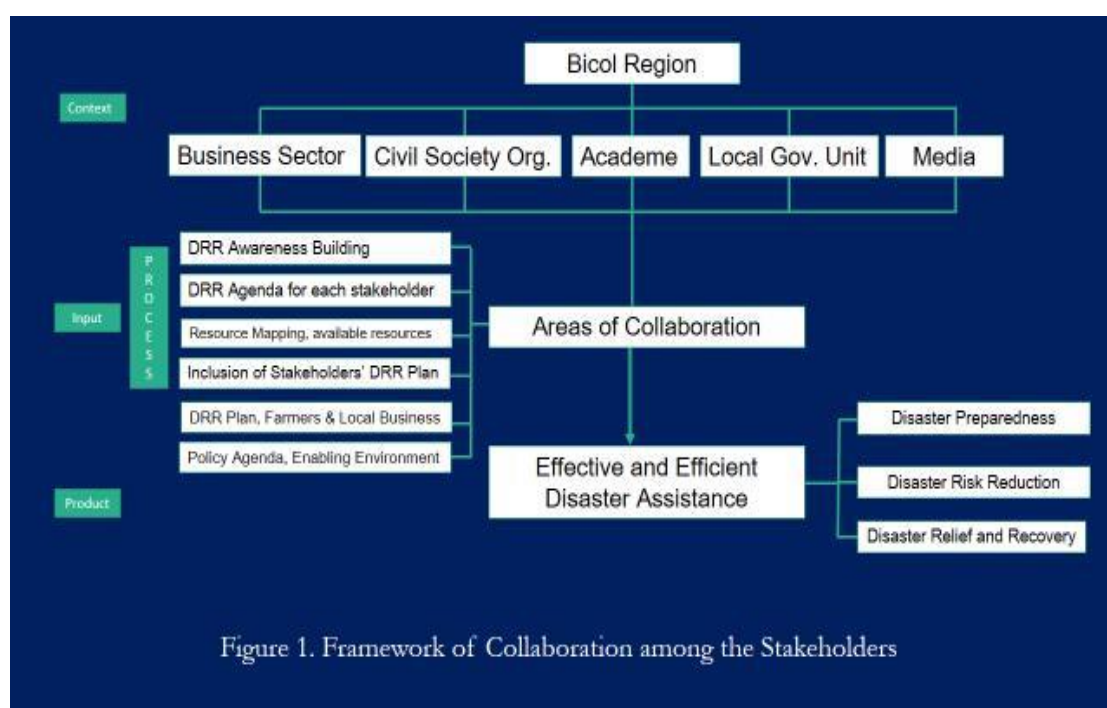
The framework of collaboration among various sectors in delivering effective and efficient disaster assistance was mainly derived from the synergy workshop among private sector and local government partnership for disaster resilience. It was participated by Metro Naga Development Council Member-LGU’s, Metro Naga Chamber of Commerce and Industries Members, and Educational Institutions. The results of synergy workshop were analysed by breaking down the information into parts that were screened according to relevance, magnitude, importance, and urgency. *Relevance* refers to how the information relates to the overall goal of the collaboration among the sectors. *Magnitude* refers to the quantitative levels and scope of influences to the level of collaboration. *Importance* refers to the qualitative degree of influence in the overall scenario of DRRM programs. *Urgency* screens data according to time consideration.

Likewise, the synthesis of the aforementioned identified DRRM programs and initiatives and its challenges of various sectors were considered in the development of framework of collaboration among various sectors. It consolidated the findings in objectives 1 and 2 into larger and more visible units so that the whole picture or essence of collaboration can be brought to the fore.

The framework has three main structures: 1) the goal of the collaboration; 2) the collaborators or stakeholders; and 3) the areas of collaboration among the stakeholders as illustrated in Figure 1. The goal of the collaboration is delivering effective and efficient assistance through disaster preparedness, risk reduction, relief, and recovery. The collaborators or stakeholders consist of the local government units, the business sector, the academe, media,

and civil society organizations. These are the members of the organized DRR alliances network of various stakeholders, which is the output of the consultation and synergy workshop.

The areas of collaboration were identified by utilizing the above mentioned framework of analysis. There are six major areas of collaboration. The first area of collaboration is Disaster Risk Reduction (DRR) awareness building with communities and business establishment. The most common DRRM program identified and implemented by various stakeholders is capacity building. However, the stakeholders have recognized that there is still a need to continuously expand and deepen its advocacy and capacity building on DRRM particularly to the most vulnerable communities in various natural and man-made calamities and to the micro and small enterprises. Increasing the level of DRR awareness is of great importance among the stakeholders. The role of the academe and the local government units can be tapped to widen the scope and broaden the content of DRR programs on capacity building, awareness, and information dissemination.



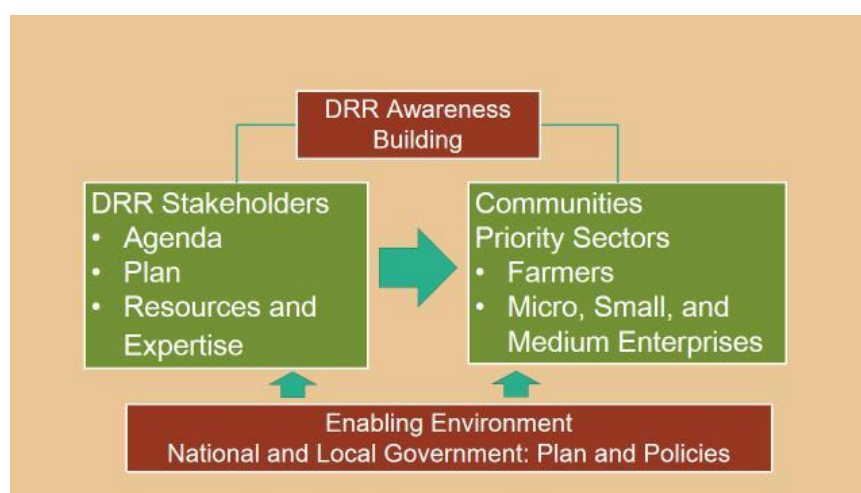
The second area of collaboration is the identification of DRR agenda for each stakeholder. Each stakeholder has its expertise and resources that can be the basis for developing their respective DRR agenda. The totality of each stakeholder's DRR agenda provides the synthesis of the DRR alliance framework. This is a bottom-up process of agenda building. Another process is top-down agenda building. DRR agenda of each stakeholder derives from established DRR alliance framework. The articulated DRR agenda could also be the basis for actual participatory and collaborative project development along DRR programs.

The third area of collaboration is resource mapping on available resources. Database on the existing and available resources and expertise of each member of the DRR alliance organization should be established. Through the database, it can contribute in the efficient mobilization of resources and expertise in any disaster preparedness, emergency response, and relief and rehabilitation activities. It can develop also complementation among the stakeholders in delivering effective DRR program and services to their clients. Such resource mapping shall be the source of strength of the DRR alliance framework.

The fourth area of collaboration is the inclusion of stakeholder's DRRM plan in overall plan of Technical Working Group (TWG). The TWG is the management team of the organized DRR alliances of the various stakeholders. The member-DRR stakeholders have raised the concern in the planning level of TWG. The DRR plan of each stakeholder should be considered in the development of the overall plan of DRR alliances. Such overall plan must ensure that all inputs of stakeholder's DRRM plans are incorporated or considered.

The fifth area of collaboration is the formulation of DRRM plans on the part of the government for farmers and local business especially the MSME's. The DRR alliance network puts emphasis on the government (local or national) role to concretely provide and implement proactive and comprehensive DRRM policies and plans for local farmers and businesses to become more resilient during disasters.

The sixth area of collaboration is for the government to develop or strengthen policy agenda for the creation of an enabling environment for disaster preparedness and mitigation. The DRR alliance shall recognize the important role of the government in developing and implementing policies that will support and create positive environment among DRR stakeholders and communities for disaster preparedness and mitigation. This also means that the government has to provide ways and means to support by way of legislative agenda for the further development and strengthened implementation of proactive and comprehensive DRR programs.



**Figure 2:** Synthesis of the Area of Collaboration among Stakeholders

Based on the identified six areas of collaboration, Figure 2 illustrates the synthesis of the collaboration among the DRR stakeholders. The DRR stakeholders have to define their own agenda and plan. They have resources and expertise that can be mobilized for orchestrated DRRM activities. The target partners or clientele of the DRR stakeholders are communities. The priority sectors by DRR stakeholders to be able to transform them to be more disaster-resilient are farmers and micro, small, and medium enterprises (MSME's).

Moreover, the DRR awareness building is still the primary need of the DRR stakeholders, communities, farmers, and MSME's for disaster preparedness and mitigation. DRR initiatives and programs of stakeholders, communities, and priority sectors needs the

support of enabling environment specially the national and local government in developing and implementing plans and policies.

## **Conclusions and Recommendations**

Based on the findings in 1) determining the initiatives and programs of various DRR stakeholders, 2) identifying the difficulties encountered in implementing DRR programs, and 3) developing the collaborative framework of DRR alliance, it can be concluded that:

DRR stakeholders (government, business sector, academe, civil society organizations, and media) have developed and implemented DRR programs and initiatives with their distinct roles and expertise but still not yet well coordinated among the stakeholders. The government is more advance in resources and network and linkages. The civil society organizations have more developed DRR programs for the communities. The business sector has more resources but they have not yet fully developed DRR programs. The academe is specialized in educating and providing DRR capacity building. The media is specialized in providing timely information on DRR.

The major difficulties in the implementation of DRR programs as perceived by the various stakeholders are: 1) the need to harmonize plans, policies, and strategies among stakeholders; and 2) farmers and small businesses lack concrete DRR plans.

The DRR stakeholders have identified specific areas of collaboration for sharing and mobilizing their resources, expertise, and information for various DRR activities. The areas of collaboration are focused on building DRR alliance network and making it functional through the Technical Working Group who identified farmers and small businessmen as priority sectors for DRR capacity building and developing resilient DRR plans.

Based on the above-mentioned conclusions, the following are then drawn as recommendations of this study:

1. Make the DRR alliance network continuously functional by strengthening the Technical Working Group;
2. Prioritize training and development for business continuum plan by MSME's as one of the major activities of DRR alliance network;
3. Develop an orchestrated DRR plans among DRR stakeholders for farmers that will make them more disaster resilient;
4. Utilize the framework of collaboration for developing a comprehensive DRR agenda and plans of the organized DRR alliance network;
5. Expand the DRR capacity building to the communities, farmers, and businessmen and their clients in well-coordinated designed of the capacity building and its implementation among the DRR stakeholders; and
6. Develop the second phase of the project proposal for funding in order to scale up the DRR alliance network in order to make it continuously functional and sustainable.

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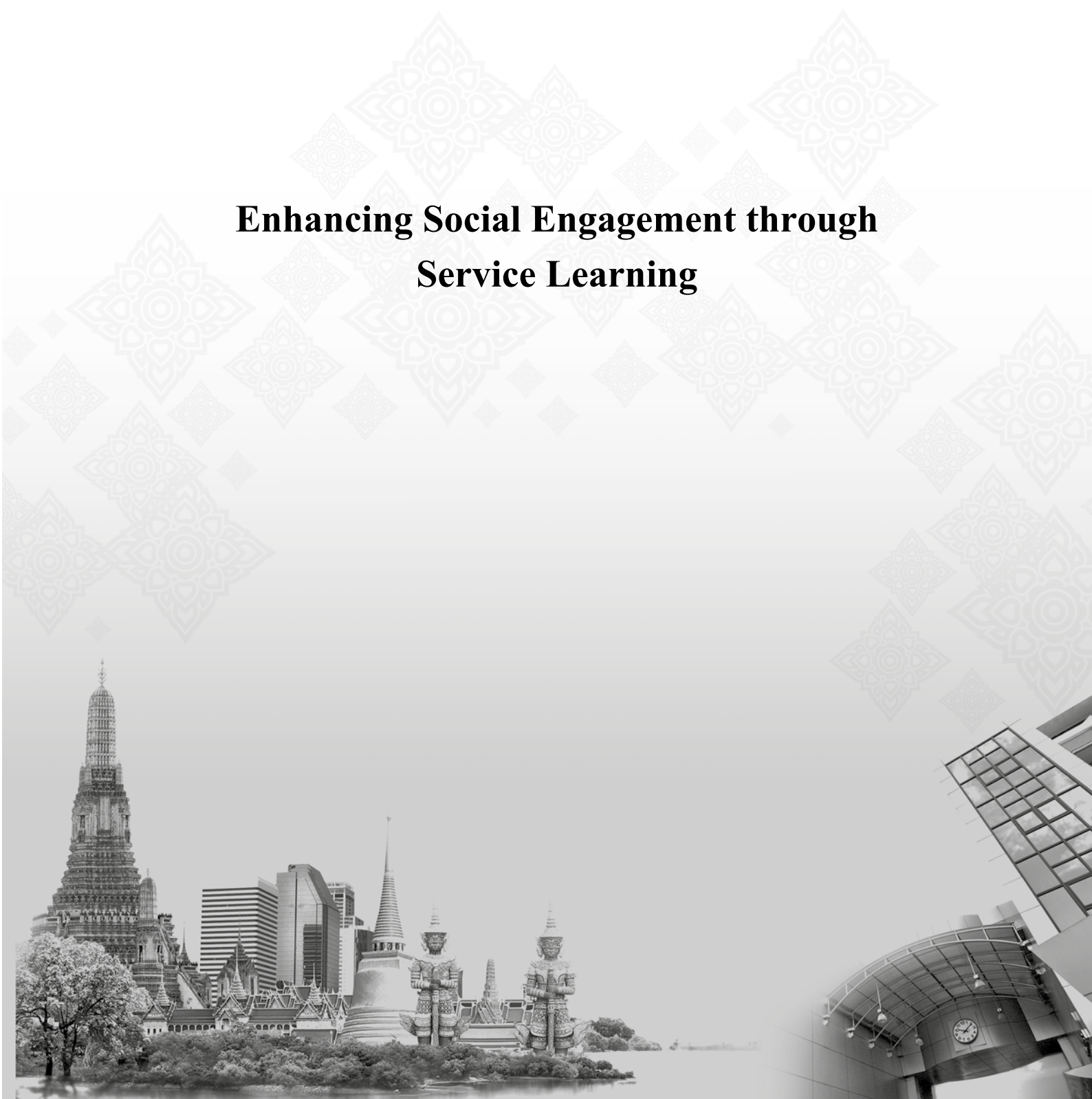
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# **Enhancing Social Engagement through Service Learning**





# **Empowering and Engaging Communities: Citizen Science on Climate Change Awareness**

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## **Abstract**

Climate change is considered by many to be the most daunting issue that has confronted human race. For the more than 20,000 families hardly hit and devastated by tropical storm Washi in 2011, this disastrous influence of climate change destroyed victims' physical life and worse intensified their sufferings due to loss of loved ones, threat to life, loss of property and valuable resources. A recent study of the University assessed the typhoon victims coping strategies and activities in dealing with loss of property, life and livelihood in the relocation communities (Daan, 2015). It revealed that victims were able to cope with food, clothing, shelter and other basic survival needs, but many were found to be still in the different degrees of emotional distraught. This study is part of the University's Climate Change Project aimed at empowering the typhoon survivors using the Climate Change Module as its initial vehicle for community organizing. It used Citizen Science as an approach and a discipline believing that most citizen science projects have underlying, testable assumptions that engaging the public in the process of research has scientific, educational, attitudinal, and behavioral outcomes (Cooper et al., 2007 as cited by Toomey et al. 2013). Thus this study aimed to increase the survivors' climate change awareness to ease the victims' level of anxiety about climate change and to enhance their emotional coping capacities by increasing their knowledge, developing positive attitude and behavior on climate change. Results show that there were significant increases in their knowledge, attitude and potential behaviors regarding climate change.

**Keywords:** Climate Change, Citizen Science, Empowerment, Engagement

## **Introduction**

Climate change is the most serious and most pervasive threat facing humanity today. Many regard climate change as perhaps the most profound challenge that has confronted human social, political and economic systems (Dryzek, Norgaard, and Schlosberg, 2011). These are most specially and clearly seen and felt during the aftermath of unseasonal and extreme weather events such as typhoons and or hurricanes causing natural disasters all over the globe. All countries at high-risk from climate change are finding it increasingly hard to create sustainable development (Munasinghe and Swart, 2005).

The Philippines is not spared as the country has been severely suffering from natural disasters for the last decade and many of those displaced by these calamities have yet to return to their homes or relocated. "What's worse is that there is hardly any room to breathe and the cycle repeats when the next super-typhoon crashes onto our shores" according to Mima Mendoza (2016), a Research Associate of Climate Change and Environment Cluster at the Ateneo School of Government, Ateneo de Manila University. The most recent was in

November 2013 wrought by typhoon Yolanda (Haiyan) killing thousands and leaving millions homeless and devastated (NDRRMC Report, 2014).

In Cagayan de Oro City, for the more than 20,000 families hardly hit and devastated by tropical storm Washi in 2011, this tragic effect of climate change did not only destroy the victims' physical life but also intensified their suffering emotionally due to loss of loved ones, threat to life, and loss of property and valuable resources. The city government's response on shelter brought the victims and their families to the present three (3) relocation communities. Families were relocated by the city government in an attempt to stabilize their immediate needs of food, clothing and shelter. Among the relocation sites is Talungan where Liceo de Cagayan University found it more appropriate to extend services seeing its capability to deliver services considering the strength of its social, health, and environmental academic programs. Service learning characterized the community extension program in that it emphasized on both student learning while addressing the real needs in the community.

A recent study of the University assessed the typhoon victims' coping strategies and activities in dealing with loss of property, life and livelihood in the relocation communities (Daan, 2015). It revealed that victims were able to cope with food, clothing, and shelter and other basic survival needs, but many were found to be still in the different stages of emotional distraught. Although some of the flood victims' emotional distress may have been generated by their living conditions, it is believed that elevated levels of emotional anxiety may be due to the precipitous traumatic effects of the disaster itself. Many studies claimed that adults and children who experienced floods and other man made or natural disasters are always left in high levels of anxiety. It would be of great advantage that they become familiar with the source of stressor such as climate change (Norris and Murrell, 1998; Coelho, 2000). In many instances, climate change causes most people to feel small and unproductive (Peterson and Zimmerman, 2004).

Thus, this study documented the first phase of the Climate Change Project of the University in its attempt to ease the victims' level of anxiety about climate change by enhancing their emotional coping capacities, their knowledge, attitude, and behavior on climate change. The project used citizen science as an approach and a discipline to empower and engage community members on climate change.

## **Framework**

In the conduct of this study a major hovering assumption is that humans should address climate change. Climate change is something to which humans should be responding believing that individual action will make an impact and empowerment focus on individual level (Heuscher, 2012; Ahmad and Abu Talib, 2015).

Climate change is strongly associated with unseasonal weather and extreme weather situations. Some scientists however, continue to claim that it may not be plausible to directly attribute these extreme weather events to climate change (Heuscher, 2012). Nevertheless, there is always one big and pervading question that usually arises during discussions in the aftermath of a disaster: "Will this extreme weather event be considered the "new normal" and therefore attributable to climate change?" This was the question posed by Kerry Emanuel (2013), a Hurricane Researcher of the Massachusetts Institute of Technology in Cambridge. On the other hand, Mendoza (2016) decried the grim reality that indeed this is "becoming the new normal

and that climate change is a reality, and countries like the Philippines are living in its deadly clutches.”

Thus, another assumption of this study recognizes that extreme weather events are defining the “new normal.” Thus, it becomes paramount for the University to facilitate projects that could help the typhoon victims in the community who are yet emotionally distressed and that it had become more difficult for them to move on, to be more prepared for this continuous onslaught of extreme weather events. Supported by the wisdom of Sun Tzu, in his famous quote on “the need to know enemy and know yourself, you need not fear the result of a hundred battles” (Mair, V.H. Translation, 2007), acquainting the typhoon victims on the dynamics of climate change where climate change is considered as the ‘enemy’ can better prepare them not only physically but socio emotionally.

**The Climate Change Project.** This ongoing project is a partnership of the University Student Body Organization with, the Liceo de Cagayan University Center for Biodiversity and Conservation (LIMCEBCON). Considered as one of the Research Centers of the University, LIMCEBCON is an education and training center for communities to increase awareness and build capacity for conservation and environmental protection and management. The center initiates partnership with environmental organizations and communities to strengthen the application of science and public policy by conducting community-based researches. Social science and natural science faculty members and students conduct studies which are in turn used by the University to make more meaningful engagement in various extension services in the adopted communities. Students and faculty members who undergo training with LIMCEBCON are called Green Advocates and are commissioned to be actively involved in the different community projects in coordination with the Liceo Center for Community Development (LCCD). One of these is the Climate Change Project, an ongoing three-year project. This endeavor intends to empower target beneficiaries through a series of teachings and workshops to heighten their awareness on climate change. Thus, the target beneficiaries include the faculty, students, administrators and members of adopted communities of the University. In this particular study, the target beneficiaries to be empowered are the typhoon victims in the adapted community. It uses Citizen Science as a means of empowering and engaging the communities.

**Citizen Science.** This mode of research is presently gaining utilization in environment research. It has emerged as a distinct field of inquiry covering not only citizen science projects but the discipline of citizen science itself (Crall et al., 2015). Citizen Science is defined by the European Commission Green Paper as “general public engagement in scientific research activities where citizens actively contribute to science either with their intellectual effort, or surrounding knowledge, or their tools and resources” (2013). This means partnering of scientists with members of the community and engaging them to become scientists themselves (Toomey and Domroese, 2013). In this study, the partners of citizen scientists are the faculty researchers.

A meta-analysis of a number of publications (n=1,935) conducted by Kullenberg and Kasperowski (2016), they indicated three main categories of Citizen Science. The largest group was composed of research on biology, conservation, and ecology, and uses Citizen Science mainly as a methodology of collecting and classifying data. A second feature of research was on geographic information research, where citizens participate in the collection of geographic data. The third was “a line of research relating to the social sciences and epidemiology, which

studies and facilitates public participation in relation to environmental issues and health. This present endeavor falls under a mix of ecology and social science.

Another classification for specific Citizen Science projects has been suggested by Wiggins and Crowston (2011) that is based on the goals of the study. Among these is action project which is initiated by volunteers designed to encourage intervention in local concerns such as improving water quality in their local stream. This present Climate Change Project is also considered an action project because it was designed to increase awareness on environmental concerns and used Citizen Science as the means of engaging the community members as they take active part in organizing the trainings and workshops and in the data gathering relative to the immediate and long term effect of the climate change awareness intervention (Wiggins and Crowston, 2011).

Utilizing Citizen Science with the targeted typhoon victims, this Climate Change Project aims to increase knowledge, attitude, and behavior toward climate change and effect lasting changes among the target beneficiaries such as sustaining activities that support actual preservation and conservation of the environment. The researchers believe that with an issue like climate change which causes people to feel small and unproductive, processes of empowering and engaging them on the causes and possible consequences of climate change may help them cope with their anxieties and emotional distress because of the typhoon experience (Heuscher, 2012). Shirk et al. (2012), however, are doubtful on the significant effect of Citizen Science project on attitude and behavior change. Nevertheless, this current study hopes to disprove Shirk et al.'s claim since the pitfalls of Citizen Science using past studies in climate change were seriously considered in the project planning.

Citizen Science is becoming popular owing to its potential of increasing environmental stewardship by environmentally motivated citizens due to their substantial and active participation in research and consequent informal (i.e., non-classroom based) science education. Most Citizen Science projects have an underlying, testable assumption that engagement of the public in the process of research has scientific, educational, attitudinal, and behavioral outcomes (Cooper et al., 2007 as cited by Toomey et al. 2013). Follet and Strezov (2015) likewise reinforced the nature of engagement of public and or community members as citizen scientists. Engagement therefore in this study mainly took the form of the activities undertaken by the citizen scientists.

**Empowerment.** Empowerment is crucial to any effort of researchers, community practitioners, or policymakers in bringing about meaningful social change related to marginalized individuals and groups (Aber et al., 2010). The typhoon victims in this present study are not only economically disadvantaged but also psychosocially marginalized. In studying empowerment, Heuscher (2012) cites the significance of developing a deep understanding of empowerment, if this is to be achieved collectively. In her study, she emphasized the significance of education as a means of empowerment but cautioned that education as a sole basis may be difficult to empower target community, although it could be the first level. She further recommended the organization of clear and actionable projects to bring together around a common task. In this study, the Climate Change Project does not rely alone on training the community members who were organized around common issue which was climate change. There are activities programmed by the Project to collectively empower the community members. It is important to look at the critical link between individual empowerment and community organization processes which require implementors to regard the "process of empowerment as participatory and developmental which means occurring over

time, involving active and sustained engagement, and resulting in growth in awareness and capacity” (Maton, 2008). This study recognizes the developmental nature of empowerment through collective effort of the community members. Therefore, empowerment as far as this paper is concerned refers to first level of community empowerment using education as its vehicle. Phase Three of the Climate Change Project is planned to gradually develop into collective efforts of community organizing as a continuing basis for community empowerment.

## Methods

The study is descriptive in nature using Citizen Science as an approach where it partnered with professional researchers to further the purpose of the study. Citizen Science was used both as an approach and discipline. It was not only a vehicle of data gathering, it was also a vehicle for engaging community members. The study was conducted in Talungan District, Canitoan Village, Cagayan de Oro City, one of the three (3) relocation communities for Typhoon Sendong (Washi) survivors in 2011. There were 132 resident-participants from the 40 households of the district who were purposively chosen using the following criteria: a) at least high school graduate; b) with at least 4 years of stay in the village; and c) willing to give their informed consent as participants.

A modified set of Climate Change Questionnaire from the study of Lubos et al. (2015) previously used in a study in collaboration with the Department of Health Region 10 entitled ‘Knowledge, Attitude and Behaviors related to Climate Change in Cagayan de Oro City: Implications on Public Health Policies and Practices’ elicited quantitative and qualitative information pertaining to level of knowledge on the causes and possible consequences of climate change. It also gathered data on the attitude and behavior of the participants on climate change. This instrument was translated into the vernacular to minimize communication barriers. A training module on Climate Change Education was used as the material for the seminar-workshops. Focus group discussions were also initiated among the participants to verify deeper into their awareness on climate change.

This study documented Phase One of the Climate Change Project which consisted of two stages, namely, Stage 1: the training of the first batch of citizen scientists and Stage 2: the training of the community members to become potential citizen scientists.

Stage 1, Phase One of the project involved the three-day training of the fifteen (15) student leaders as citizen scientists using the Climate Change Module to empower them for community involvement. However, only ten (10) sustained the training and eventually became the first batch of citizen scientists. Even with fewer citizen scientists it was important to pursue Phase One of the project. The observed spirit of service and volunteerism with commitment that prevailed among the student leaders were very encouraging and also very important elements in conducting partnerships in Citizen Science (Follet & Strezov, 2015; Kullenberg & Kasperowski, 2016). Voluntary actions could very well sustain the citizen scientists’ interest in learning about the context of the research and in pursuing the collection of accurate information.

Stage 2, Phase One on the other hand, consisted of the actual deployment of the first batch of citizen scientists into the community where they conducted the same Climate Change Module with the 132 typhoon survivors. This was only after ensuring that they were already equipped for their immersion in the community to serve as trainers of community volunteers as citizen scientists. The community volunteers underwent the same training with that of the

first batch of student-citizen scientists. Before the three-day training, a pretest using the Climate Change Questionnaire was administered as benchmark. A post-test of the same instrument was also administered after the three-day training to determine the increase/change in knowledge, attitude and potential behavior on climate change. The data were organized and analyzed through descriptive statistics as well as t-test to determine the increase in knowledge after the three-day training workshops on climate change.

Qualitative data were organized using the classification adopted from the guidelines of Heppner and Heppner (2004) where categories that emerged from the analysis of the data were separated into three types (general, typical, variant) and summarized in a table. Furthermore, an indication of how often a response was given as general, typical, or variant. It is considered general if one half to almost all of the participants indicated the response. Typical were those responses that were stated at least by a fourth to almost half of the participants. Variant when these were mentioned by only one up to less than ten of the respondents.

The second batch of citizen scientists will be thoroughly chosen from the 132 training-participants and will be identified as community volunteers in Citizen Science. This is Phase Two of the Climate Change Project and hope to materialize by the end of July. Being survivors themselves, they are potential citizen scientists and can be effective in educating other communities from the lessons and common experiences they learned about climate change.

To determine whether the training module was effective, Kirkpatrick's Model of Training Evaluation was used. It observed the four levels, namely: 1) Reaction; 2) Learning; 3) Behavior; and 4) Result. Thus, the instrument for this study was designed to capture the first two levels with suggestive questions that may lead to potential behavior change. The last level is part of the ongoing community organizing activities of this project which is spearheaded by the Office of the LCCD Director.

## Findings and Discussions

Out of the 132 participants, only 117 actively took part in the answering the questionnaire. Table 1 shows data before and after the training. It is noted that there is increase in their general knowledge about climate change.

## Results and Discussion

**Table 1:** General knowledge on climate change as perceived by the respondents

How much do you know about climate change?	Before		After	
	Frequency	Percentage	Frequency	Percentage
as least a fair amount	58	43.94	91	68.94
not much	57	43.18	8	6.06
hardly anything	2	1.52	18	13.64
no response	15	11.36	15	11.36
<b>Total</b>	<b>132</b>	<b>100.00</b>	<b>132</b>	<b>100.00</b>

There were increases in the responses of “at least a fair amount” from almost 44% to almost 69% after the training; a decrease in “not much” from more than 43% to almost 7% was

also noted. It is surprising to note that there was an increase of “hardly anything after the intervention.” Trainers noted that these were the ones who were late or partially attended the whole span of training.

Likewise, Table 2 shows their knowledge of effects of climate change in terms of the frequency of events that occur near their community before and after the training workshop. The data revealed considerable increases in the knowledge of the community members on their awareness on the effects of climate change especially in terms of increase in rainfall among all others. There were 15 participants who chose not to answer the questions.

**Table 2:** Frequency Distribution on the ‘Yes’ Responses Before and After the Training (n=132)

Relate to this event listed as to the frequency of its occurrence near your community.	Before		After	
	Always		Always	
	F	%	F	%
Increase in rainfall	73	55.30	116	87.88
More drought	51	38.64	114	86.36
More intense tropical storms / typhoons	59	44.70	115	87.12
Temperature increase / decrease	68	51.52	112	84.84
More landslide	43	32.58	114	86.36
More flooding	48	36.36	114	86.36
Differences in seasonality of crops	54	40.90	115	87.12
Vegetation changes	53	40.15	115	87.12
Increases in insect pest	58	43.94	114	86.36
No Response	15	11.36	15	11.36

The participants were also asked if they could associate certain events with climate change. Table 3 presents responses of the community member-participants on how they associate certain events with climate change before and after the training.

**Table 3:** Distribution of Responses on Their Association of Events to Climate Change (n=132)

Do you associate any of the following with climate change	Before		After	
	Yes		Yes	
	F	%	F	%
Earthquakes	72	54.55	117	88.64
Typhoon	87	65.91	117	88.64
Increased greenhouse gases	56	42.42	116	87.88
Landslide	75	56.82	117	88.64
Volcanic eruptions	53	40.15	116	87.88
Floods	81	61.36	117	88.64
Sea level rise	73	55.30	116	87.88
More intense storm surges	80	60.61	117	88.64
Health epidemics	61	46.21	117	88.64
Global warming	86	65.15	117	88.64
Coral reef bleaching	38	28.79	116	87.88
Droughts	57	43.18	117	88.64
Climate variability	81	61.36	117	88.64
Fish kill	53	40.15	117	88.64
Ozone hole problem ( ozone depletion)	74	56.06	117	88.64
El nino / la nina	71	53.79	117	88.64
No specific association	30	22.73	117	88.64
No response	15	11.36	117	88.64

Using video clips, movies and workshops, the intervention for three days discussed intensively on the different climate change topics to include major events such as those that were listed above. The participants were intently focused on the visuals. It was easier to increase their knowledge and awareness with the prepared visuals. Results show that the visuals especially the video clips and movies helped a lot in changing their opinions in associating typhoons, earthquakes, and the like with climate change. The same visual materials presented instructional segments that discussed causes of climate change.

Table 4 shows the opinions of the community members on the causes of climate change before and after the training. Similarly with the previous responses, there was a significant increase of the community members' awareness on the cause of climate change. The question: "Do you think any of the following cause climate change?" gathered answers that indicated positive changes on the manner they regarded the sources of climate change. Almost all of them answered that these practices cause and or contribute to climate change. Notably, gas emissions such as 'burning of fossils such as coal, etc....', and 'poor industrial practices' were responded with the highest percentage of 'yes' as causes of climate of change.

**Table 4:** Distribution of Responses on the Causes of Climate Change Before and After the Training (n=132)

Probable Causes of Climate Change	Before		After	
	Yes		Yes	
	F	%	F	%
Burning fossils such as coal, oil, natural gas	53	40.15	117	88.64
Coral bleaching	45	34.09	116	87.88
Transportation, such as driving car, bus or boat ( vehicle emissions)	71	53.79	115	87.12
Land clearing ( eg. Deforestations, slash and burn/kaingin practices)	94	71.21	115	87.12
Poor agricultural practices ( eg. Pesticide misuse )	60	45.45	116	87.88
Poor industrial practices ( eg. Factory emissions, improper waste disposal)	92	69.70	117	88.64
Improper garbage disposable such as burning garbage	47	35.61	116	87.88
Sea level rise	60	45.45	115	87.12

The above data just presented show the increase in knowledge on events associated with and probable causes of climate change among the community members who have undergone the three-day training. Part of the tool used for data gathering required qualitative responses. When asked what would probably cause climate change, most common among the qualitative responses of the participants could be captured in the following answers:

- "illegal na pag mina ug illegal nga pag putol sa kahoy" (Illegal mining and illegal logging)
- "Mga aso sa sakyanan, pagamit sa ref ug aircon" (Smoke coming from the vehicles and use of refrigerator)
- "Pagkaingin" (Swidden farming/slash and burn)
- "tungod rapod sa tawo" ( Brought/caused by the people themselves)
- "Sa bukid nga gakaupaw"(Denudations of the mountains)
- "Mga hugaw gikan sa factory" (Factory waste)

Knowledge on these events was observed to have also affected their outlooks. By asking the question: "Do you think any of the following can be important in helping your community

deal with climate change?”, Table 5 reveals the shift in the attitude of the respondents regarding climate change using t-test to establish significant difference in their responses before and after the training.

**Table 5:** Comparison of Means to Establish the Change of Attitude Before and After the Training

<b>Attitude:</b> Do you think any of the following can be important in helping your community deal with climate change?	<b>Before</b>		<b>After</b>		<b>T-Value</b>
	<b>Mean</b>	<b>Description</b>	<b>Mean</b>	<b>Description</b>	
Reduction in fossil fuel (coal, oil, natural gas) use	4.15	Mod. Con.	4.96	Ext. Con.	7.59*
Reduction in consumption of electricity	3.81	Mod. Con.	4.97	Ext. Con.	10.61*
Energy efficient measures in the industrial & commercial sectors	3.92	Mod. Con.	4.98	Ext. Con.	9.52*
Increased research & development of renewable energy technologies	4.14	Mod. Con.	4.96	Ext. Con.	7.59*
Improved crop cultivation in the agricultural sector	4.28	Mod. Con.	4.99	Ext. Con.	6.69*
Increased public awareness of climate change issues	4.19	Mod. Con.	4.99	Ext. Con.	6.96*
Improved pest management strategies	3.88	Mod. Con.	4.97	Ext. Con.	9.68*
Increased and better surveillance systems	4.02	Mod. Con.	4.97	Ext. Con.	8.48*
Early warning systems for health-related impacts (such as dengue)	4.02	Mod. Con.	4.99	Ext. Con.	8.58*
Public education on health-related impacts of climate change	4.21	Mod. Con.	5.00	Ext. Con.	7.33*
Improved water storage	4.24	Mod. Con.	4.97	Ext. Con.	6.64*
Flood warning systems	4.09	Mod. Con.	4.99	Ext. Con.	7.74*
Disaster management plans	4.16	Mod. Con.	4.99	Ext. Con.	7.39*

Data in Table 5 disclosed the significant change of the participants’ attitude towards practices that are deemed important in helping the community deal with climate change. From ‘moderately concerned’ before the training to ‘extremely concerned’ after, the trend of responses suggest that there is a growing concern of the community members regarding the issue. The data also disclosed the change in opinion of the participants regarding climate change mitigation after the training. Reflected in Table 6, their stand about the possible actions/behavior that can be done or that they were presently doing was found to be ‘high’ from the general response of ‘moderate’. This also supports the data on attitude considering the indication of significant change in opinion of the participants on climate change mitigation. These responses were also reinforced with interview data from the series of focus group discussions with the community members.

**Table 6:** Comparison of Means to Indicate Change of Opinion Before and After the Training (n=132)

<b>Climate Change Mitigation</b>	<b>Before</b>		<b>After</b>		<b>T- Value</b>
	<b>Mean</b>	<b>Description</b>	<b>Mean</b>	<b>Description</b>	
1. Use environmentally safe products	3.13	Moderate	3.97	High	9.18

2. Reduction in Harmful Emission	2.91	Moderate	3.95	High	11.44
3. Participate in Reforestation/Tree Planting	3.33	Moderate	3.93	High	7.13
4. Conduct impact assessment studies	3.03	Moderate	3.97	High	11.09
5. Maintenance of safe household drains	3.32	Moderate	3.97	High	8.71
6. Proper waste segregation	3.16	Moderate	3.97	High	9.67
7. Practice Soil Conservation	3.10	Moderate	3.95	High	9.93
8. Avoid Burning of Solid Waste	3.16	Moderate	3.95	High	9.18
9. Maintaining a compost pit	2.86	Moderate	3.95	High	10.63
10. Conserve energy	2.95	Moderate	3.94	High	10.62

The qualitative data on the respondents' behavior towards climate change mitigation reinforced the previous opinions of the participants. There were six (6) themes in the respondents' answers, namely: practices related to garbage or waste management, preservation of trees, conservation of other natural resources, pollution control, programs and laws related to climate change, and personal commitment to climate change problem. The following were the most common commitment of the participants in terms of behavior relating to climate change challenge:

1. Garbage or waste management:
  - "Pag praktis sa 3Rs" (Practicing the 3 Rs (reduce, reuse, recycle).
  - "Magbuhat ug compost pit sa nataran sa likod" (To make compost pit in the backyard)
  - "Dili mi magsunog sa basura" (No open burning)
  - "Pag-andam ug sakto nga butanganan sa basura" (Provide adequate garbage cans for garbage collection)
  - "Kanunay mi ga limpyo sa among tungod" (Cleaning the surrounding regularly)
  - "Kanunay nga pag hinlo sa mga kanal ug pagbuhat sa saktong mga kanal" (Cleaning drainages regularly)
  - "Talagsa na lang mi mogamit ug plastic, ang uban kay amo gina recycle" (Less use of plastic or recycle plastic)
2. Preservation of trees:
  - "Magtanom ug mga punuan" (Tree planting or reforestation)
  - "Ipaundang ang mga illegal na pag putol sa kahoy" (Stopping illegal logging or cutting of trees)
  - "Ipaundang ang mga pag sunog sa bukid" (Stop the slash and burn farming practice/ kaingin)
3. Conservation of other natural resources
  - "Pagtipig sa mga basura ug puy anan sa mga isda" (Preserving coral reefs or fish sanctuaries)
  - "Ipa-undang ang mga illegal nga pagpangisda" (Stopping illegal fishing)
  - "Pagdumili sa pagmina" (Saying no to mining activities)
  - "Pag daginot sa tubig" (Conserving water)
  - "Pagdaginot sa elektrisidad ug enerhiya" (Conserving electricity or energy)
4. Pollution Control
  - "Pag papaundang sa polusyon gikan sa mga sakyanan" (Stopping pollution from cars & motorized vehicles)
  - "Pagpaundang sa polusyon gikan sa mga paktorya ug planta" (Stoppollution from factories & other industries)
  - "Ibawal ang pag-panigarilyo" (Banning cigarette smoking)
  - "Sakto nga pagpatuman sa mga balaod sa "Clean Air Act" (Proper implementation of the Clean Air Act)

5. Laws, policies, regulations and programs related to environmental protection and prevention of climate change.

- “Unahon pg atiman sa mga isyu or problema mahitungod sa pagbag-o sa klima” (Prioritizing climate change related issues or problems)
- Pagpatuman ug sakto sa mga programa bahin sa pagbag-o sa klima” (Implementing properly climate change related projects/programs)
- “Istriktong pagpatuman sa pagsilot sa mga dili motuman sa mga balaod bahin sa pagbag-o sa klima” (Strict penalty for offenders of climate change related laws)
- “Pagusbaw sa mga sistema sa pagpugong sa mga pagbaha” (Improving flooding mitigation system)

“Pagbuhat ug kampanya ug pag edukar sa katawhan bahin sa pagbag-o sa klima” (Awareness/Education campaign on climate change)

6. Personal commitment to act on the problem of climate change.

- “Adunay disiplina ug pasalig sa pagbuhat ug sakto para sa kinaiyahan” (Having the discipline or commitment to do what is right for the environment)
- “Mahimo nga tig-amping sa kinaiyahan gikan sa Ginoo” (Becoming stewards of God's creation)
- “Pagpalambo sa kooperasyon sa mga katawhan sa kada komunidad” (Developing teamwork or cooperation in our community)
- “Ang mga lider dapat madasigon sa pagdumala sa katawhan” (For leaders to have strong political will to lead the people)

The primary aim of this study was to increase the climate change awareness among the Typhoon Sendong (Washi) survivors as means of easing the victims' level of anxiety about climate change and to enhance their emotional coping capacities by increasing their knowledge, attitude and behavior on climate change vis-à-vis empowering them on climate change using Citizen Science. The data from both quantitative and qualitative sources show the extent to which the objective of this study was attained. Tables 1 to 6 quantitatively disclosed evidences of the increase in their knowledge, attitude and behavior. On the other hand, the result of the series of focus group discussions supported the quantitative findings and revealed the depth of the participants' responses on the climate change issue and reinforced the answers to the structured question of “To what extent can you practice or are you practicing these activities?” which implied potential positive behavior for climate change. Their responses especially were impressive in that their comments denoted ability to redirect themselves to issues bigger than their own. Answers leading to waste management, preservation of trees, conservation of other natural resources, pollution control, programs and laws related to climate change, and personal commitment to the problem at hand were indeed substantial that indicated their level of awareness.

The findings may not have direct evidences of easing their level of anxiety. However, during the data organization and analysis, the faculty researchers engaged the student-citizen scientists in discussions where they also talked of their sense of fulfillment during the training and in the data gathering. This fulfillment, they said, came from their experience when they observed most of the participants to have gained positive dispositions about climate change. Thus, there may not be explicit evidences of ease in their anxiety on climate change but the community members' responses gave significant implications of their readiness to move on as they willingly participated in the workshops and in the data gathering.

## Conclusions and Recommendations

This paper intended to determine the effectiveness of empowering the typhoon survivors by raising their awareness on climate change in order to alleviate to a certain extent their emotional distress about the experience of loss which they continue to cope with. Considering that issues like climate change which causes people to feel small and unproductive, empowering and engaging them on causes and possible consequences of climate change had helped them overcome their anxieties which cause them emotional distress. Earlier assumption stated that educating the typhoon victims on the dynamics of climate change can better prepare them not only physically but socio-emotionally. It is further concluded that the training have empowered them and gave them the head start information to be more familiar with the 'enemy' (Sun Tzu, in Mair, 2007) and to be more prepared on issues of climate change.

In fine, widening people's understanding and awareness on climate change can influence attitude and behavior which in turn can lead to a more stable emotional state. Shirk et al. (2012), were doubtful on the significant effect of Citizen Science project on attitude and behavior change. Results of this study show however, that it is possible to initially change opinion, attitude and behavior with Citizen Science on climate change.

Considering the robust data gathered by the students, this study also confirms the practical worth of partnering with citizen scientists who have also become empowered and engaged in the campaign of the University on climate change awareness. Citizen Science was not only a beneficial tool in this study; it has advanced its practicality as a discipline.

This study recognized that sustaining attitude and behavior, need collective support of the community members themselves. It also implied that while the emotional distraught may not be totally healed, their initial responses and or commitments to help mitigate climate change can be spring board for them to move on where they can positively face climate change issues in the future given the continuing community support. Hence, the proponents believe that attitude and behavior towards climate change could become more stable when the Climate Change Project goes into the completion of the Phase Two and Phase Three where collective efforts of community members will be dealt with more intensively.

Thus, this study recommends the implementation of the next Phases of the Project as programmed. These researchers are optimistic that engaging the typhoon victims to plan for their own climate change mitigation activities and sustaining them is possible given the University's and their community's collective support. Working towards the project's sustainability will not only prepare the typhoon victims physically and socio-emotionally, it will also cultivate in them resilience to climate change.

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# **Integrating Service-Learning in the Graduate Business Administration Program of Aquinas University of Legazpi**

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## **Abstract**

Service-learning is an approach for education as well as community development. It empowers students and academic institutions to become more cognizant of the needs of the communities. It engages students in projects that serve the community and build their social and academic capacities. This paper proposes to develop a model that will pilot the integration of service-learning in the Strategic Management course of the Business Administration program the Graduate School of Aquinas University of Legazpi (GS-AUL) in SY 2017-2018. Building on the Theory of Experience and Learning, the researchers consider learning as a process where knowledge is created through the transformation of experience. As a mode of experiential education and collaborative teaching-learning strategy, the AUL-Graduate School endeavors to enrich a student's learning and reconnect them with the communities. The students of the Master in Business Administration (MBA) will be grouped to work as consultants or training specialists to community/business organizations and will assist them in improving their organizational processes. This paper reviewed some literature on service-learning; described the service-learning process, how it will be integrated in the graduate Business Administration program; and, developed assessment mechanisms for service-learning that will develop students' academic skills and enhance their sense of civic responsibility and commitment to the community. Moreover, it presented the potential benefits of service-learning in the graduate Business Administration program. It is possible that the effectiveness of a more meaningful learning experience can be enhanced with the pilot integration of service-learning.

**Keywords:** Service-Learning, Experiential Education, Graduate Business Administration Program, Academic Skills, Civic Responsibility

## **Introduction**

Service-learning, a concrete effort to link theory and practice to enhance student learning, is a widespread and growing pedagogy in higher education (Boyer, 1990). The concept of service learning is based primarily on the views of John Dewey, a philosopher and educator who advanced the concept that active student involvement in learning is a vital element in effective education. He viewed the community as an integral piece of educational experiences for both enhancing a student's education and for developing future societies (Waterman, 1997). Service-learning involves blending the key elements of community service and internships so both the service providers and the service recipients benefit. The benefits

result from a dual focus on the service being provided and the learning that will occur (Furco, 1996).

Emerging research on service-learning validates a longstanding philosophy: integrating academics and community service delivers greater student leadership, enriched learning, and improved academic performance (Simonet, 2008). Among the disciplines, business is critically positioned to play a significant role in an academic institution's collaborations or connections with the community and the society on the whole. Business schools have employed diverse approaches to prepare their students for the realities of business world. Some use practicum or occupational internship, allowing students to apply what they have learned in school and thus, enabling them to develop their skills and competencies. Plato stated that the purpose of education should be the development of individuals as guardians and leaders of the community (Schennach, 2001). John Dewey (1916) asserted that reforms in education could play a significant role in social change.

Rightly, a well-designed and implemented service-learning approach helps address unmet community needs while simultaneously providing opportunities to gain academic knowledge and skills (Root, 1997). Service-learning is increasingly recognized as a legitimate part of a business education (Papamarcos, 2002). It offers the greatest potential for fostering civic responsibility as it provides prospects for students to engage directly in their communities and meet community needs while enhancing their course work (Gottlieb and Robinson, 2002). It is being integrated as a legitimate educational approach in business disciplines such as accounting (Gujarathi et. al., 2002; Rama et. al., 2000), marketing (Petkus, 2000), management (Godfrey, 1999), project management (Brown, 2000), and economics (McGoldrick et. al., 2000). Confident on the theory of „learning by doing“, and that service to one's community is an important part of one's ethical and moral education, service-learning is a remarkably appropriate pedagogy for courses requiring performance skills or social awareness components which are best developed through participation (Bhaerman, et. al., 1998). It will not only enrich a student's learning, but will also allow her/him to provide real benefit to the local communities.

Aquinas University of Legazpi has at all times been committed to uphold its vision-mission, one of the reasons for integrating service-learning in the graduate Business Administration program. „Though service-learning will yet be piloted, it could nurture service commitment of students even as fostering collaborations with the community.

The concept of service learning is based primarily on the views of John Dewey, a philosopher and educator who advanced the concept that active student involvement in learning is an essential element in effective education. Service learning evolved as a vehicle to strengthen student's learning, to reconnect them with their communities, to counter the imbalance between learning and living, and to repair the broken connection between learning and community (Anonymous, 1997b). Madsen (2004) defined service-learning as a multidimensional pedagogy (a form of experiential learning) that is integrated within a credit-bearing course in the form of organized, thoughtful, and meaningful project. Students learn and develop through active participation in organized service experiences that meet community needs. Service learning is used to increase effective communication skills (Tucker and McCarthy, 2001) and the development of civic values (Morgan and Streb, 2001). It is a powerful educational experience where interests interconnect with information, values and beliefs are formed, and action results (Sawyer, 1991). Integral to service-learning is the

principle that community service can be connected to classroom learning in such a way where service is more informed by theoretical and conceptual understanding and learning is more informed by the realities of the world. Service-learning is differentiated and characterized by components that focus on the community and the institution as well. The components that focus on the community include the following: (a) The service is meaningful to the community; (b) The service meets a need or goal; and, (c) The community defines a need or a goal. Those that focus on the institution are as follows: (a) The service flows from and into course objectives; (b) Assignments requiring reflection integrate the service with course objectives; and, the assignment is assessed and evaluated (Weigert, 1998). Service-learning is a distinct form of experiential education for two reasons (Furco, 1996): (1) It provides reciprocal benefits to the university and community participants or organization; and, (2) It is equally focused on the service provided by the students as well as the learning that is fostered by doing the service. Service-learning encompasses several learning challenges inasmuch as it is set up to create an interaction among students, professors, and the community (Angelidis, Tomic and Ibrahim, 2004). It achieves this task by: (1) Sharpening the students' skills in applying academic knowledge to a practical "real world" setting; (2) Improving students' awareness of community around them and helping them develop a greater sense of civic responsibility; (3) Changing the role of the professor to that of an advisor to the student and the community; and, (4) Deepening the relationship between the university and a community that welcomes and appreciates the advice it is receiving. Theoretically, service-learning is a process of empowerment for students, faculty and community members alike as together they are co-learners and co-teachers in creating better communities.

This paper, hence, aims to integrate service-learning in the graduate Business Administration program of Aquinas University of Legazpi. It is conceptualized as a way of experiential education as well as a collaborative teaching-learning strategy that will foster academic enhancement, personal growth and civic responsibility among students. By integrating service-learning into the graduate Business Administration program, students will not just learn by memorizing knowledge, but by designing and implementing projects wherein knowledge is applied. The students will provide relevant service in community settings that offer experiences related to the academic course. The study is delimited to describing the processes in the pilot implementation of integrating service-learning in the AUL-Graduate School. The approach is intended to combine community service with structured opportunities for learning among the students. Such opportunities are significant in building continuing ties between Aquinas University and the communities where it is located.

## **Statement of the Problem**

Service-learning is viewed to link the learning goals and objectives of an academic course with meaningful community service. Engaging students for meaningful and transformative purposes remains an ongoing educational goal (Skinner and Belmonte, 1993). Essentially, evolving into a more interactive learning approach rather than the usual lecture method is a significant part, expressly in graduate education. As a vehicle to strengthen students' learning and reconnect them with their communities, the AUL-Business Administration graduate program takes initiative to promote the concept of service-learning as a means to foster student and faculty community involvement. Government, business, and industry in Asia have clamored for students cum employees who are engaged and persistent

problem solvers (Holtzman and Kraft, 2011). As Hitch (1994) reported, “service-learning seems to be one of those rare education models that enable all of the participants to be winners.”

The study developed a model that will pilot the integration of service-learning in the AUL-Graduate Business Administration program. Specifically, it sought to answer: (1) What service-learning process, to include assessment mechanisms, will be implemented for integration in the Graduate Business Administration program?; and, (2) What are the potential benefits of integrating service-learning in the Graduate Business Administration program?

Service-learning has been increasingly recognized as a legitimate part of business education (Papamarcos, 2002), hence, the significance of this paper. Being a special form of experiential education that intertwines community service with classroom instruction (Bowen, 2005), it could provide an experiential link between the theoretical nature of an academic institution and the practical environs of a workplace (Godfrey, Illes, and Berry, 2005). It will allow students to gain a deeper understanding of course content, a broader appreciation of their chosen discipline, and an increased sense of responsibility (Bringle and Hatcher, 1960). It will enhance the way things are learned and reflected upon. With focus on critical and reflective thinking, students can make use of their skills to help solve a „real life“ problem or meet needs of the community. The results of the study may be useful in planning and implementing community-based projects in collaboration with Aquinas University of Legazpi. Piloting service-learning in the AUL Graduate School will provide increased understanding of an educational method that intentionally connects community service to classroom learning that could bring about positive impacts on academic engagements and achievement, on civic attitudes and behaviors, and personal and social skills. Fairly, the students could better appreciate that community partnerships allow them to bridge learning in classroom with real life work.

## **Theoretical Framework**

Service-learning sees a need in education to create a strong connection between students and their communities (Boyer, 1987). Experiential education, of which service-learning is a part, makes conscious application of students’ experiences by integrating these experiences into the curriculum. Aquinas University declares in its vision-mission, “Aquinas University of Legazpi, a nurturing community of Dominican learning, transforming and perfecting, under the patronage of St. Thomas Aquinas, commits itself to the pursuit of academic excellence through dedicated study, the strengthening of one’s moral integrity through fervent prayer and witnessing, the sharing with others of the fruit of one’s endeavor through loving service, the enhancement of one’s emotional maturity towards a more Christian community, and the promotion of cultural advocacy for a genuine appreciation of Catholic, Filipino, and Bicol identity,” is drawn in with a profound commitment to interact with and further the communities that surround the University. The primary mission „though is defined as providing academic and intellectual foundation that will support lifelong learning process.

This paper is anchored on the Theory of Experience and Learning which considers education as a “deliberately conducted practice,” and where teachers and students together reveal and recreate reality (Taylor, 2002). Service-learning is conceptualized as a form of experiential education and collaborative teaching-learning strategy where learning occurs through a cycle of action and reflection. It begins with the assumption that experience is the foundation for learning; and various forms of community service are employed as the experiential basis for learning. (Morton & Troppe 1996) Experience is compromised of sensory

awareness, emotions, physical conditions, and cognition (Carver, 1996). The shift from traditional community service to service-learning occurs when there is specific connection made between service and learning opportunities (Alliance for Service Learning in Education Reform, 1993). According to Dewey (1963), student experience results from the interaction between the student and the environment which he referred to as the *principle of interaction*. Students are influenced by those that are internal to them and those that are objective parts of the environment. All these are influenced by their attitudes, beliefs, habits, prior knowledge, and emotions (Ross & Nisbett, 1991). Dewey also premised his theory of experience on the *principle of continuity* which asserts that every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after (Dewey, 1938). With the principles to service-learning programs as a means to ensure quality, attention needs to be given to the interaction between the server and the served, between the past and present experiences, and to the service-learning transactions which form part of the learning. A true situational learning approach helps to ensure the quality of service (Sigmon, 1987). Dewey contends that the task of the educator is to determine the effects of the present experience upon future experiences and to ensure that experiences will be educative by specifying the direction of growth. The enlightening value of experience is how it contributes to the development of the students and the nature of students' relationships with the environment. Dewey's perceptions and philosophy of education contributed to the pedagogy of service-learning as he considered the areas that can be related to service-learning, as follows: linking education to experience; democratic community; social service; reflective inquiry; and, education for social transformation (Saltmarsh, 1996). The experiential learning, hence, transforms the learners, helps them revise and enlarge knowledge, and alters their practice. It affects aesthetic and ethical commitments of individuals and alters their perceptions and interpretations of the world (Keeton, 1983). The experiential learning model we know has been shaped over time by John Dewey (1938), Kurt Lewin (1951) and Jean Piaget (1952) and with more recent contributions by David A. Kolb (1984). Experiential learning is viewed as an approach that integrates education, personal development and work (Kolb, 1984). It explores the cyclical pattern of all learning from Experience through Reflection to Conceptualizing and Action, returning to further experience. Kolb (1984) asserts that immediate Concrete Experience is the basis for and followed by observation and reflection which are assimilated into the formation of abstract concepts and generalizations from which implications for action are deduced. It is an approach that integrates education, personal development and work and explores the cyclical pattern of all learning from Experience through Reflection to Conceptualizing and Action, returning to further experience. The experiential learning is flexible and there may be "learning wheels within wheels" at any point in time (Atherton, 2004). Service-learning activities provide opportunities for concrete experience, reflective observation, abstract conceptualization and active experimentation.

## Methodology

The researchers used the descriptive method, with literature review as source of data of the study. The study is a pilot research that identified and formulated the service-learning processes, including the assessment mechanism in the engaged learning requirement, and the potential benefits of integrating service-learning. The pilot integration of service-learning in the Business Administration program was discussed with the AUL Graduate School administration and faculty. Coordinated meeting with the community/local government unit within the University's location was also conducted. Students were also invited in the meeting.

## Results and Discussion

### Integrating Service-Learning in the Graduate Business Administration Program

Service-learning to be integrated into the graduate Business Administration program and used as a teaching and learning method is a dynamic response to Aquinas University's mission and values. The service-learning requirement will be a modest endeavor to engage students with the community. The students will have the chance to participate in the community to help meet the needs of its people.

As a pilot study, the service-learning approach will be integrated into Strategic Management, a major course in the Master of Business Administration of the AUL-Graduate School, in SY 2017-2018. The importance of Strategic Management in achieving organizational goals is rightly recognized in the business world. It seeks to understand the challenges and the environment in which the business operates, the direction management intends to head, the strategic plans to bet the business enterprise moving in the intended direction, and the tasks of implementing the strategy positively. The course aims to provide the students the core concepts, frameworks, and techniques of strategic management that will allow them to understand what managers must do, in whatever type of organization, to attain excellent performance. The course content focuses on developing an understanding of strategic management concepts and theories, industry analysis, and business strategies in various industry contexts.

In the proposed integration of service-learning in the graduate Business Administration program, the requirements are described as follows:

- The service-learning component will be integrated in the course syllabus.
- The students will render 20 service hours during the semester, the service experience which will be with a business/community organization.
- The class will be divided into teams or group of three or four members.

Each team will be given the option to choose from any of the two models:

- (1) **Placement**- students will identify a community/business organization with which to serve and perform a strategic analysis of the business/organization in the community, as in the case of Strategic Management. and,
- (2) **Project** - students will work with their peers to generate a product that is useful to one or more business/community organizations. The project's deliverables will be determined by the organization client for whom the students work in the manner where they will relate as unpaid consultants or training specialists, under the supervision of their faculty-advisor. The project will have to be completed to the organization's specifications and on the agreed-upon timetable.

In any of these models, the primary goal will be to connect the student's service experience with the course content.

- The service-learning process will include the necessary phases as preparation, action, reflection, and evaluation/assessment.
  - **Preparation.** In this phase, the syllabus integrating service-learning will be developed, collaboration with possible business/community organization partnership will be designed, the identification of specific learning outcomes, and choosing the service-

learning model. The faculty and the community involved will together plan the instructional project and determine roles and responsibilities of all involved.

- **Action.** The service-learning activity will be implemented in this phase. On the first day of the course, an orientation about service-learning will be conducted. The topics in the developed syllabus will be presented. The faculty will facilitate the knowledge and skills needed by the students in their service activities. The business/community organization will cooperate in the service activities and inform faculty of concerns arising from service activities. The business/ community representative may be invited to visit the class. Depending on the project or learning engagement, the students will complete a service-learning agreement with the business/community organization supervisor and submit to the faculty of the course.
- **Reflection.** Reflective assignments and activities throughout the semester will be implemented. Reflection will be done constantly in both the planning and implementation. The reflection process will allow students to put together connection between what they are doing and what they are learning. According to Blyth, Saito and Berkas (1997), without reflection, students feel less responsibility toward serving others, civic involvement, and the environment. The faculty will help the students develop meaningful connections between service experiences and course content. meaningful application of essential knowledge and skills (Mueller, 2011). The purpose of assessment is to further improve student learning. It will emphasize performance, requiring students to demonstrate their knowledge, skills or competencies appropriate to situations. The key idea in authentic assessment is that students are active participants. The students will be made to understand that they have to generate some evidence or documentation that will demonstrate what meaning they have achieved or gained from their experience and its connection to the course content. The method of authentic assessment will include daily learning log/journal, individual/group project, oral presentation, and final written report. Self-assessment will be made part of the students' learning experiences, hence, students will be encouraged to take part and be involved in the monitoring and evaluation of their own learning. The authentic assessment will be evaluated through the use of rubrics which will be developed by the faculty-advisor.

## Potential Benefits of Integrating Service-Learning

Service-learning presents an opportunity for Aquinas University of Legazpi to live by its vision-mission. Explicitly, service-learning will strengthen the definition of teaching and service. It will provide an avenue to explore the notions of civic responsibility and commitment to the community within the context of a wide-ranging society. By integrating service-learning, specifically as a component of the Strategic Management course, it can offer various benefits to students, faculty, the University and the community.

For students, research (Markus, et. al., 1993; Giles & Eyler, 1994; Eyler, et. al., 1997) supports the claims that service-learning (1) improves academic achievement; (2) connects to specific curricular content enhances learning of course content; (3) has a positive impact on students' personal, social and cognitive outcomes; (4) improves interaction between faculty and students which has a positive impact on student learning; and, (5) enhances students' beliefs in their personal efficacy. As integrated in Strategic Management, the students will be able to understand and apply knowledge, by using strategic management concepts, such as, the development of goals, formulation of strategies, and benchmarking. The students will be given the chance to conduct a strategic analysis of a business/community organization. As they get immersed in real world problems, they will be able to develop the habit of critical thinking, making them find solutions help address problems. It will provide them an opportunity to enhance their conceptual, analytical, interpersonal and technical skills. They will also learn the

challenges they will be facing in the real world as they live through the experience of making a difference within the community. Service-learning will allow students to better appreciate their civic responsibilities and commitment to the community. For the faculty, service-learning will revitalize teaching efforts and improve community connections. Service-learning will help improve the efficiency or quality of services provided by AUL-assisted community organizations. It will offer opportunities to build relationships between community members and the University. With service-learning, it will enable the community to have increased access to University resources, such as, expertise, program and facilities. It will provide a link to AUL by involving the community in the student's learning process. It is likely that through service-learning, there will be an awareness of community issues. Community organizations will value the expertise of students not only for the enthusiasm but because of the students' eagerness to explore the intersection of theory and practice. Service-learning will benefit the community by identifying, addressing and solving problems in more effective, creative ways. Long-term engagement with organizations could lead to research/community development. For the University, service-learning will not only contribute to the fulfillment of its mission, but will help increase its responsiveness to the needs of the community.

## Conclusions

This paper described an initiative to integrate experiential learning in the graduate Business Administration program. It embraced the use of service-learning through community engagement as a way to enrich student learning and better prepare students to deal with diverse, complex community issues. Service-learning is a means to empower students and academic institutions to be more responsive of the needs of the community of which they are a part and be engaged and civically committed in equally beneficial ways. The key value of service-learning rests in the enhanced student learning. To connect the student's service experience with the course content, students need to identify a business/community organization with which to serve, or work with their peers to generate a product that could be useful to one or more business/community organizations. The service-learning process includes the phases of preparation, action, reflection, and evaluation/assessment. This paper has identified the potential benefits of service-learning.

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# **Towards the Development of a Lasallian Pedagogical Model of Service Learning: The De La Salle University-Dasmariñas Experience**

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## **Abstract**

De La Salle University-Dasmariñas (DLSUD) is committed to its educational mission of providing “a human and Christian education to the young, particularly the youth at risk” including marginalized communities. To realize this mission, DLSUD emphasizes “learning by doing” in its approach to education. Learning takes place when there is actual application of the knowledge and skills learned in the school, and if the student can make a connection between academic learning and the world s/he lives in. One way to check this is through service learning.

This study analyzed the cognitive, affective and psychomotor effects of service learning to the students and its benefits to the community-recipients. It used both quantitative and qualitative approaches in assessing the programs/activities in the church or community as service learning component of REED142. The main respondents were 2,125 REED students during the second semester of SY2014-2015 who answered the survey questionnaire. The semi-structured interview guides were used for the faculty and community-recipients. The students reported that they participated in different community activities that had positive effects on their cognitive, affective and psychomotor domains of learning. The students’ involvement in the community had favorable impact on the community-recipients. It served as the source of intervention and valuable human resource and it contributed to the psycho-emotional well-being of the people concerned. The findings of the study helped in the development of a pedagogical model of service learning that shall be a unique DLSUD approach in facilitating students’ learning and, at the same time, in responding to the needs of the marginalized communities.

**Keywords:** Service Learning, Community Engagement, Knowledge and Skills Application, Experiential Learning, Students Involvement

## **Introduction**

All institutions of higher learning aim for quality education. Quality education ensures the development of the whole person that includes his/her development in the cognitive, affective and psychomotor domains. Learning and development in the three domains normally happens in the classroom setting. However, learning is not only limited in the boundaries of the school but it also takes place outside the school premises. It happens when there is actual application of the knowledge and skills learned in the school. There is learning if the student can really make a connection between the academic learning and the world s/he lives in. One

way to check this is through service learning. Service learning aims to reach out to a wider segment of an academic community beyond what is covered or discussed in a course syllabus within the confines of the four walls of the classroom.

Service learning is defined differently by various authors. To Bennett, et al. (as cited by Toledano & Lapinid, 2009), service learning is an educational process where students are guided and educated into a volunteer experience in communities that will allow them to observe, practice, and deliver skills and services taught in the classroom. Other authors (Isaacson, Sapertein, Buchanan, et al. as cited by Toledano & Lapinid, 2009) defined service learning as a pedagogy that enables students to engage in active and real life learning experiences. It is an opportunity to apply the concepts, knowledge and skills learned in the subjects in classroom setting in the outside community. To Bringle and Hatcher (1999), service learning is a course-based, credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility. Ehrlich (2005) articulated three directions of service learning. First, it enhances academic learning for it enables students to connect thoughts and feelings. It offers students opportunities to consider what is important to them. Second, it serves as a vehicle to promote skills and knowledge needed for leadership. And third, it contributes to a greater sense of civic responsibility in students. Astin, et al. (2000) stated that service learning represents a potentially powerful form of pedagogy because it provides a means of linking the academic with the practical. The more abstract and theoretical material of the traditional classroom takes on new meaning as the student “tries it out,” so to speak, in the “real” world. At the same time, the student benefits from the opportunity to connect the service experience to the intellectual content of the classroom. By emphasizing cooperation, democratic citizenship and moral responsibility through service learning, higher education connects to the wider community and prepares students to meet society’s urgent needs.

Service learning may influence the process of intellectual and social maturation in the education of a child by unifying the affective, cognitive, and behavioral domains (Moss, 2009). A meta-analysis conducted on the impact of service-learning on students noted five outcome areas to students who participated in service learning program such as attitude toward self, attitudes toward school and learning, civic engagement, social skills, and academic performance. It was furthered that students in the service learning program have enhanced self-efficacy and self-esteem, increased positive attitudes and behaviors related to community involvement, and gained social skills relating to leadership and empathy (Celio, Durlak & Dymnicki, 2011). It was also significantly noted in the same study that service learning students have grown in various social skills related to communication, leadership, and problem solving. Similarly, it was noted that service-learning has a civic learning element, offering students the knowledge, skills, and values they will need for well-rounded civic engagement (in <http://www.ferris.edu/asl/>).

Compared with other students, those with substantial hours of service learning, a lot of reflection, and a high degree of motivation attributed to service learning significantly increased their belief in the efficacy of their helping behaviors, maintained their pursuit of better grades and their perception that school provided personal development opportunities (Scales, Blyth, Berkas & Kielsmeier, 2000). The results of this study indicate that service learning can positively affect students’ social responsibility and academic success.

De La Salle University-Dasmariñas (DLSU-D) is one of the 17 La Salle schools in the Philippines committed to its educational mission of providing “a human and Christian education to the young, particularly the youth at risk” including marginalized communities. To realize this mission, DLSU-D emphasizes “learning by doing” in its approach to education. It adopts a curriculum that involves the integration of service learning in the subjects. It allows the students to make connections of the academic learning and the world they live in.

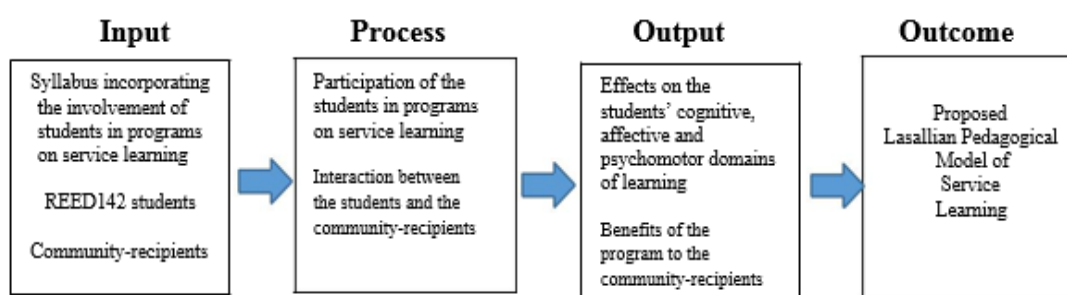
Thus, with the researchers’ aim to formulate a service learning model for DLSU-D, the current study assessed the service learning component of a Religious Education subject “Discipleship in the Christian Community” (REED142). This subject is taken by students to enrich their knowledge on the church as a community of disciples and to participate in and live out the church’s mission and sacramental life. The students are required to have an involvement in church or community as an opportunity to exhibit their familiarity, deep understanding and appreciation of the course and translate it into actual situations.

The study sought to answer the following questions:

- 1) What activities related to service learning are participated in by the students as part of the requirements of REED142?
- 2) What are the effects of the activities on the students’ cognitive, affective and psychomotor domains of learning?
- 3) What are the benefits of the program on the community-recipients?
- 4) How can the University sustain the program on service learning?
- 5) Based on the results of the study, what unique model of service learning could be proposed?

## Conceptual Framework

The Input-Process-Output-Outcome (IPOO) model was used as the framework in this study. The INPUT consists of the syllabus incorporating the involvement of students in programs on service learning, the REED142 students who were involved in the said program, and the recipients in the community where the students were immersed. The PROCESS consists of the students’ participation in the community and the interaction between the students and the community recipients. The OUTPUT consists of the effects of the activities on the students’ cognitive, affective and psychomotor domains of learning and the benefits of the program to the community-recipients. The OUTCOME consists of the proposed model of service learning for DLSUD.



**Figure 1: The Paradigm of the Study**

## Methods

The study used a mixed method of quantitative and qualitative approaches in assessing the programs/activities in the church or community as service learning component of REED142. There were three groups of respondents in this study. The main respondents were 2,125 students enrolled in REED142 during the second semester of SY2014-2015. These students belonged to the seven colleges of the university as follows: 39 from the College of Criminal Justice Education (CCJE), 90 from the College of Education (COEd), 256 from the College of Tourism and Hospitality Management (CTHM), 289 from the College of Liberal Arts and Communication (CLAC), 446 from the College of Science and Computer Studies (CSCS), 501 from the College of Business Administration and Accountancy (CBAA), and 504 from the College of Engineering, Architecture and Technology (CEAT). The other groups of respondents were the (a) community-recipients and the (b) Religious Education faculty members who were handling the subject. The research was conducted after the 10-hour community involvement of the students.

The researchers utilized two types of self-made instruments: a survey questionnaire for the student-respondents and semi-structured interview guides for the faculty and community-recipients. The survey questionnaire was used to collect data on the students' specific involvement in the community and the effects of such involvement in their cognitive, affective and psychomotor domains of learning. Under these major dimensions were sub-dimensions such as new perspectives, awareness of community issues, collaboration, understanding solutions to community problems, and preparation for real life with ten-item statements each. Separate interview guides were used for the Focus Group Discussion (FGD) conducted with the faculty and the community-recipients which provided the data on the benefits of the students' involvement to the community-recipients and the ways on how to further sustain the program.

The researchers used frequency count and mean to quantitatively analyze the data. For the qualitative analysis of data, coding and formulation of themes from the significant statements of the community-recipients and persons in-charge of the program were done.

## Results and Discussion

**Problem 1:** What activities related to service learning are participated in by the students as part of the requirements of REED142?

**Table 1:** Activities Participated in by the Students

Activities	Frequency
Liturgical and Church-Related Activities	988
Care, Help and Support for the Needy	861
Environmental Care and Protection	516
Clerical works	253
Organizing events	128

N= 2,746 (This number represents the number of times the students mentioned their participation in the various activities enumerated herein.)

Table 1 shows that on the top of the list is the involvement of 988 students in liturgical and church-related activities. This includes the assistance they gave as usher, server, lector, and

collector and in the preparation of liturgical materials as well as participating in prayer meetings, Bible reading, preaching and teaching in the Sunday school. Second in the list is the participation of 861 students on activities related to care, help and support for the needy. Help was extended to the street children, orphans, elderly, persons with disability, and the victims of calamity. This was done through the different charity works, outreach activities, and relief operations participated in by the students. They also participated in feeding programs, medical missions and livelihood programs. The third in the list is the involvement of 516 students on activities related to environmental care and protection which were exhibited through planting trees, joining in waste segregation, recycling, environmental exhibits, weeding, watering plants and encouraging people to save the environment. There were also 253 students who did clerical work both in the parish and in the office of the Barangay where they helped in the computer works, filing documents and in recording. There were also 128 students who shared their talent in organizing events for the community, including fund-raising.

These activities are similar with the list of service learning projects mentioned by Bowen (2007) that may be integrated effectively into the curriculum through the process of reflection: serving as math and reading tutors to elementary school pupils, assisting the Habitat for Humanity organization in building houses for homeless people, supporting entrepreneurial projects in low-income neighborhoods, producing documentaries for nonprofit organizations, preparing business plans for a small enterprises, creating websites/databases for human service agencies, collecting litter in public parks, making presentations on the state of the environment, conducting voter registration drives, or raising funds for charitable organizations.

**Problem 2:** What are the effects of the activities on the students' cognitive, affective and psychomotor domains of learning?

**Table 2:** Effects on the Cognitive Domain of Learning

Cognitive Domain	Mean*	VI
New Perspectives	4.42	Always
Awareness of Community Issues	4.39	Always
Collaboration	4.35	Always
Understanding Solutions to Community Problems	4.42	Always
Preparation for Real Life	4.43	Always
Overall	4.40	Always

*\*Range of Scale: 1.00-1.80 Never; 1.81-2.60 Seldom; 2.61-3.40 Sometimes; 3.41-4.20 Often; 4.21-5.00 Always*

Table 2 displays the effects of the activities engaged in by students in their cognitive domain of learning.

The overall mean of 4.40 which is verbally described as "always" implies that the students gained knowledge from the different activities that they did in the communities where they conducted their service learning.

From the five areas rated, the highest mean of 4.43 was registered under "Preparation for Life." This means that the students believed that involvement in community activities is a good training ground for students to become more responsible citizens, they realized that the poor are also members of the community who have dignity as persons, they realized that time management can help them to become more organized in any activity, they understood that abiding the rules and regulations promulgated in the church/ community creates peace and order, and they realized that volunteerism helps them to develop a sense of sharing and caring

to others. Since these items pertain to life preparation, it is implied that the students will become better citizens of their community who will be able to create a difference in the lives of the people and in the affairs of the community because they will be more responsible, more caring, more law abiding, more respectful of others, and have a deeper sense of volunteerism.

These findings were confirmed by the results of the FGD conducted among the faculty members and the persons in charge of the community where the students served. Both the FGD participants shared that there were some students who continued their involvement in the community even after their allotted time was finished. These people believed that the students were able to develop the sense of volunteerism which motivated them to go back even after the fulfillment of their course requirements.

**Table 3:** Effects on the Affective Domain of Learning

Affective Domain	Mean	VI
New Perspectives	4.47	Always
Awareness of Community Issues	4.51	Always
Collaboration	4.46	Always
Understanding Solutions to Community Problems	4.48	Always
Preparation for Real Life	4.55	Always
Overall	4.49	Always

*\*Range of Scale: 1.00-1.80 Never; 1.81-2.60 Seldom; 2.61-3.40 Sometimes; 3.41-4.20 Often; 4.21-5.00 Always*

The involvement of the students in community activities also affects their affective domain of learning. It can be seen from Table 3 that the affective domain received an overall mean of 4.49 which is also verbally interpreted as “always.” It means that there are certain changes in the attitude and behavior of the students as they participated in the different community activities.

From the five areas rated, the highest mean of 4.55 was also registered under “Preparation for Life.”

Through the community activities, the students learned to respect the advice of leaders to enhance their leadership skills, they valued people who managed their time well, they appreciated the efforts of the community in helping the students become responsible citizens, and they respected the rights of the poor. These basic values of respect, time management, and appreciation of others are important ingredients to develop a responsible citizen of the community who will be able to function productively. The FGD results pointed to the feeling of contentment, achievement, pride, and confidence that the students developed during the conduct of the activities.

A study that supports this finding is the meta-analysis conducted on the impact of service learning on students wherein multiple benefits of service learning to students are enhancement of their self-efficacy and self-esteem, increase in positive attitudes and behaviors related to community involvement, and gains in social skills relating to leadership and empathy (Celio, Durlak & Dymnicki, 2011).

**Table 4:** Effects on the Psychomotor Domain of Learning

Psychomotor Domain	Mean	VI
New Perspectives	4.28	Always
Awareness of Community Issues	4.28	Always
Collaboration	4.33	Always
Understanding Solutions to Community Problems	4.30	Always
Preparation for Real Life	4.37	Always
Overall	4.31	Always

\*Range of Scale: 1.00-1.80 Never; 1.81-2.60 Seldom; 2.61-3.40 Sometimes; 3.41-4.20 Often; 4.21-5.00 Always

There are also effects on the psychomotor domains of learning of these students. Table 4 shows the overall mean of 4.31 for the psychomotor domain verbally described as “always.” This means that there are certain changes and development in the skills and abilities of these students as they performed their activities in the community. Some of the noted changes and development of the skills and abilities of the students are in the areas of interpersonal relations, coordination, planning and leadership.

From the five areas rated, the highest mean of 4.37 was also registered under “Preparation for Life.”

Through the community activities, the students followed the rules and regulations of the organization, they respected the community’s contribution in pursuing their goals in life, they performed their duties and responsibilities as members/leaders of the organization, they planned their schedules for an efficient implementation of programs and activities, and they continued to do community service in the church/ community. The FGD pointed out that the students were able to have new experiences, a hands-on training that enabled them to become self-reliant and motivated them to continue to help others. These also contributed to the spiritual growth of the students.

It can be seen from the results of this study that service learning has positive impact on the three domains of learning of students involved in the program. This is analogous to the findings of a research which stated that service learning may influence the process of intellectual and social maturation in the education of a child by unifying the affective, cognitive, and behavioral domains (Moss, 2009).

Looking at the three domains, it can be noticed that the affective domain received the highest means in all the areas rated. It implies the importance of the affective domain because this is where the processing of information and experiences takes place in order to have better appreciation of these cognitive materials that may eventually lead to a change in the students’ behavior and in their psychomotor domain. It was also observed from the results that preparation for life has the highest mean score compared to the other sub-dimensions under the different domains of learning. This implies that students engaged in service learning acquire change and development of favorable attitude, behaviors and skills that would make them as responsible citizens which can be attributed to the psychomotor domain of learning. On the other hand, awareness to community issues has the lowest mean score compared to the others. This may be expected because awareness of community issues is the beginning of the process or in the input level attributed to the cognitive domain.

**Problem 3:** What are the benefits of the programs/activities on the community-recipients?

**Table 5:** Benefits on the Community-Recipients

Themes	Significant Statements
Source of Intervention	<ul style="list-style-type: none"> <li>- The students were very creative. They provided activities that facilitate learning of the residents such as tutoring, and have taught several subjects like Math, Arts and Music, Reading, and even gardening.</li> <li>- The learning activities they provided contributed to the objective of the center for the residents in taking the Alternative Learning System of the Department of Education.</li> <li>- We were able to get 100% passing rate.</li> <li>- The students were a great help to us in developing the social skills of the children (SPED). The children gradually learned how to interact and communicate with others. They also learned how to introduce themselves and to become functional.</li> <li>- The residents enjoyed their presence. It is common for them as adolescence to get bored when they are not busy. This was addressed by the presence and activities provided by the students.</li> </ul>
Valuable Human Resource	<ul style="list-style-type: none"> <li>- They helped us in accomplishing some tasks like encoding, entry of data in the baptismal book, indexing of books and stamping of envelopes.</li> <li>- The students provided assistance during baptism, worship service / mass, catechism and other church activities.</li> <li>- The volunteers are big help to us. They assisted us in entertaining visitors. They also help us in doing tasks that requires computer literacy since they have this skill.</li> <li>- They help us in cleaning the place. They worked even it is for free.</li> <li>- They fill-in the hours when we do not have activities for the children. They relieved us from some of our duties.</li> </ul>
Contribution to Psycho-emotional wellbeing	<ul style="list-style-type: none"> <li>- We are glad to have these volunteers. Often times, the residents are not visited (or were not ever visited) by their family members and/or relatives which create unfavorable thoughts and emotions on the residents. They thought that they are no longer loved/wanted and abandoned. The student-volunteers presence' addresses these thoughts and feelings, and somehow satisfied the love and belongingness needs of the residents.</li> <li>- They are welcome to us. They are being appreciated by the kids. The children are happy when they are here.</li> <li>- The church is happy and satisfied with the program/activities done by the students. They became our friends, they show courtesy even outside the church. Some of them also invite us during their family gatherings /occasions.</li> </ul>

Results of the interview with the community leaders and the persons directly in-charge of the program showed that service learning has favorable impact on the community-recipients. This result is supported by several researchers as they quoted that students and community are recipients of the benefits of service learning (Deeley, 2010; Steiner & Watson, 2006 in Crone, 2013). There are three benefits on the community-recipients identified in the current study which were themed as Source of Intervention, Valuable Human Resource, and Contribution to Psycho-emotional Wellbeing. These benefits/themes were conceptualized from the significant statements of the interviewees as reflected in Table 5.

As can be observed, the activities and/or programs provided by the students such as facilitation of learning and tutoring, and development of social skills of the residents were noted to be of importance as additional intervention to achieve the objectives of community.

Likewise, the students were valued by the parish and community recipients because they augment the need for human resources to fulfill some functions which the current line-up of staff in the community can no longer attend to. Moreover, the students' presence was also well appreciated because of the time they spent with the children/residents. This complements the lack of visit from family members and relatives of the residents, thus addresses the psycho-emotional needs of the residents.

**Problem 4:** How can the University sustain the program on service learning?

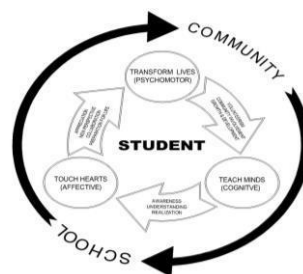
**Table 6:** Recommendations on How to Sustain the Service Learning Program

Themes	Significant Statements
Values formation / Awareness of social responsibility	<ul style="list-style-type: none"> <li>- It is the desire of students to change the attitude and outlook of their colleagues to make them more involved in the community and church programs.</li> <li>- More participants should be doing this not just for grade or as a requirement for a particular subject but to be involved, promote and support the program voluntarily and continue the service with awareness of their social responsibility and initiative of serving the poor.</li> </ul>
Curriculum development	<p>A significant number of students and faculty would like to integrate service learning to more Religious Education subjects.</p> <p>The students recommended that values development topics on community and church involvement be included in the REED curriculum. They also suggested to hold bible studies, involvement in church organizations and church youth programs, become members of church organizations for their spiritual development.</p> <p>It was recommended that many topics be included or reinforced in the curriculum</p> <ul style="list-style-type: none"> <li>- or in their REED subject. Topics such as "Getting in touch and helping the less fortunate", "Value of respect", "Building confidence", "Exposure and immersion programs for the Church and community" were suggested.</li> </ul>
Program improvement	<ul style="list-style-type: none"> <li>- The students wanted to add to the regular activities done in the church and community like outreach programs for the poor, feeding, teaching the street children, other environmental programs and different church activities.</li> <li>- The faculty members would like to establish a Memorandum of Agreement (MOA) with the diocese/parish to intensify the students' involvement with the parish and establish coordination with the Lasallian Community Development Center (LCDC) for their involvement with the community.</li> <li>- Respondents from the community and the parish would like better scheduling and lesser number of volunteers at a time to maximize their involvement and better coordination with the REED faculty in-charge.</li> <li>- Students proposed improvements in the condition where they will be sent like better accommodation and provisions for food and water. Likewise, together with the parish and community, they also proposed better planning and orientation regarding the program.</li> <li>- On the other hand, the faculty members suggested a support program to volunteer teachers to intensify Lasallian volunteerism.</li> </ul>

Table 6 shows the major themes under which the recommendations of the respondents may be categorized. The first theme, Values Formation/Awareness of Social Responsibility, pertains to the inculcation of the spirit of service and volunteerism among the students, as well as a change in their attitude. The activities that they will be doing in the community should not

be seen just as a source of grade but as a manifestation of their love for others that can be shown through the help that they will be extending to the community. If this will be the perspective of the students when they go to the community, their involvement will be more meaningful not only for them but also to the community-recipients. The second theme, Curriculum Development, refers to the activities or topics that may be integrated in the curriculum or in the other subjects of the students. Through the integration of the said topics and activities, the students will be more prepared to go out in the community and serve. They will develop better understanding of the community and its situation, thereby giving them a clearer perspective of the kind of service that they will be giving. The last theme is Program Improvement. The recommendations on additional activities to be done, formal agreement between the school and the community, proper coordination with the units involved in community service, improvement in the scheduling of activities and in the conditions where the students will be sent all aim to improve the present program implementation which will result to a better structured service learning plan.

**Problem 5:** Based on the results of the study, what unique model of service learning could be proposed?



**Figure 2:** DLSUD Model of Service Learning

The model shows the different processes involved in achieving the goal of service learning through the Lasallian way of teaching minds, touching hearts, and transforming lives. Several facets of learning happen before progressing to the next domain. The progression starts with teaching minds which is the cognitive domain of learning. Service learning is integrated in the syllabus of the course. Concepts are taught in the classroom and the students are eventually introduced to service learning through community exposure. Through this, students become aware of the issues in the community, gain better understanding of these issues, and further realize the meaning of social responsibility and service – their role to help address community issues. They further realize that involvement in community activities is a good training for them to become responsible citizens, and that everyone has a role to fulfill in the community. The process of realization leads to the affective domain, thus, touches the hearts of the students. They learn to appreciate that they are part of and have something to share in the community, and feel blessed in working in the community without expecting anything in return. They also learn to appreciate how people collaboratively and committedly serve the community. Moreover, students involved in service learning appreciate leaders who could bring people together to help the community, meaning they learn to appreciate the importance of leadership as a skill (preparation for life), and gain new perspectives regarding rules and regulations being carried out in the community. These facets of appreciation, gaining of new perspectives, collaboration and preparation for life lead to transformation of the students' behavior (psychomotor). Changes in their behavior in relation to community involvement are noted. They obey rules and regulations, explain to others that they can work harmoniously despite individual differences, perform tasks well in the community to set good example,

develop skills in working with people for social transformation, and respect the community's contribution in pursuing their goals in life. This shows that students engaged in service learning are transformed as responsible and law abiding citizens. They get themselves involved in community service/volunteerism which eventually contributes to their growth and development, including their spiritual well-being as they find meaning in their lives/existence.

The learning process starts from the cognitive domain of teaching minds to the affective domain of touching hearts and to the psychomotor domain of transforming lives, and the cycle continues. Through service learning, the link between school (classroom learning) and community (experiential learning) is provided for better growth and development of the students. Furthermore, better relationships and collaboration are also established between the school and community for their mutual benefits.

## **Conclusions**

DLSU-D believes that learning takes place when there is actual application of the knowledge and skills learned in the school, and if the students can make a connection between academic learning and the world they live in. That's why it integrates service learning in the curriculum. REED142 is one subject where students are required to spend ten hours of involvement in their chosen community.

The students reported that they participated in the following activities: liturgical and church-related activities; care, help and support for the needy; environmental care and protection; clerical works; and organizing events. These activities have positive effects on their cognitive, affective and psychomotor domains of learning. The greatest impact was noted in their affective domain which received the highest means in all the areas rated. Of the sub-dimensions measured, preparation for life received the highest mean score while awareness of community issues had the lowest mean score. The students' involvement in the community had favorable impact on the community-recipients. They served as the source of intervention and valuable human resource and they contributed to the psycho-emotional well-being of the people concerned.

## **Recommendations**

Because of the positive effects of service learning to both the students and the community-recipients, the program is recommended to be continued but proper coordination with the units concerned should be done and the arrangement should be formalized through a Memorandum of Agreement. The coordination of all the units involved in the implementation of the service learning program will assure the program's preservation and quality. It is also in this way that the program is regularly reviewed and improved to ensure that it really upholds its purpose.

To ensure the best results for both the students and the community, proper orientation needs to be done prior to the participation of the students in the service learning program. The topics and activities recommended by the students should be integrated in the different subjects they will take so that they will be more ready for their community exposure.

The study resulted in a model of service learning that is uniquely DLSUD's. This model shows the different processes involved in achieving the goal of service learning through the Lasallian way of teaching minds, touching hearts, and transforming lives. This may be used in

all other classes that integrate service learning. Through its widespread use, it is hoped that the link between the University and the community will be further strengthened and that the students will be able to develop a higher level of awareness, understanding, realization for their cognitive domain; appreciation, new perspective, collaboration, preparation for life for their affective domain; and volunteerism, community involvement and growth and development for their psychomotor domain.

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# Opportunities for Social Engagement of Business Student Leaders

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## Abstract

Membership in affiliate professional organizations is a form of social engagement that has proven beneficial to the students. It has an important role in their leadership and career preparation. This study was conducted to identify the opportunities for social engagement of Business student leaders, specifically the Accountancy students who run as officers of the Junior Philippine Institute for Accountants (JPIA). The main instrument used in this study was a survey questionnaire that was administered to 62 officers of JPIA from Region IV-A. The study found out that there were a lot of opportunities for social engagement that were made available to the JPIA officers like leadership seminars, regional and national seminars, conferences and conventions related to Accounting, firm visits, planning sessions with Accounting professionals, general assemblies, academic and non-academic competitions, and outreach activities. They were also introduced to the environment and activities of the Accounting profession. The officers likewise developed the values of fellowship and solidarity with the other chapters, social awareness through the different outreach activities, as well as the moral values central to the Accounting profession.

It is recommended that since membership in student or junior affiliates of a professional organization has proven beneficial to the student-members, there should be concerted efforts on the part of the faculty and school administrators to encourage their students to join these organizations.

**Keywords:** Student Leaders, Social Engagement, Professional Organizations, Student Organizations

## Introduction

College education is considered as a preparation for one's future career. It is where the students are equipped with the necessary knowledge, skills and attitudes that they will use when they practice their profession. These knowledge, skills and attitudes should not only be developed in the four corners of the classroom but rather, they should be acquired even outside the school premises. One way to ensure this is to allow the students to engage in organizations related to their future job. This can be referred to as social engagement.

Social engagement, according to Millican (in <http://arts.brighton.ac.uk/stibbe-handbook-of-sustainability/additional-chapters/social-engagement>) is the ability to work constructively within and between social groups to create more resilient and sustainable communities. It can also mean one's participation in the activities of a social group (Prohaska, Anderson and Binstock (2012).

Membership in affiliate professional organizations is a form of social engagement that has proven beneficial to the students. Erstad (2015) said that joining a student chapter of a professional association is one powerful way to position the students' future for success in their respective career fields and it allows them to take advantage of leadership opportunities that

can help them sharpen the skills they'll need to advance their careers. It can help the students to build their skills, attend special events to network with professionals in their field, and access hundreds of valuable resources to jumpstart their careers (in <https://www.asme.org/about-asme/professional-membership/benefits-for-students>). Being part of a professional organization can be financially beneficial for students through scholarships, loan opportunities, supplemental training, news update or free access to field-related resources (in [http://study.com/articles/The\\_Benefits\\_of\\_Student\\_Membership\\_to\\_Professional\\_Associations.html](http://study.com/articles/The_Benefits_of_Student_Membership_to_Professional_Associations.html)). It will enhance their understanding of the profession and the issues it faces, and encourage connections between the association and the students (in <http://ischool.sjsu.edu/current-students/resources/complimentary-student-memberships-professional-associations>).

Balthazard enumerated three reasons why students should join their professional associations: (1) It could very well get the students their first job. (2) They could learn all sorts of stuff about careers that could be of use to them in making career decisions. (3) They can get some real help in achieving professional designations (in <https://yconic.com/article/why-students-should-join-their-professional-associations>). Similarly, Mata, et al. (2010) mentioned that joining professional organizations and attending professional conferences can provide tremendous career development, skill-building, and professional networking opportunities.

Business students in particular have a lot of options in joining professional organizations. In the Philippines, the following professional organizations have their student or junior affiliates: Philippine Institute of Certified Public Accountants (PICPA) for accountants with Junior Philippine Institute for Accountants (JPIA), Chartered Institute of Management Accountants (CIMA) for management accountants with Junior Philippine Association of Management Accountants (JPAMA), Financial Executives of the Philippines (FINEX) for financial executives with Junior Financial Executives of the Philippines (JFINEX), and Philippine Marketing Association (PMA) for marketing professionals with Junior Marketing Association (JMA). These junior affiliates have an important role in the leadership and career preparation of the Business students.

JPIA in particular serves as a medium of expression and aspiration of the Accountancy students. It also promotes and protects their welfare and interests in particular and the Accountancy profession in general. It aims to uphold fellowship and solidarity, academic excellence, socio-civic and cultural consciousness, moral integrity, critical, analytical and constructive thinking, and organizational thinking. Membership to this organization can prove beneficial to the budding accountants since Accountancy is considered as one of the most challenging professions in the Philippines, given the usual low percentage passing in the Certified Public Accountants (CPA) board examinations.

Since the researcher is an Accountancy student and the president of JPIA of De La Salle University-Dasmariñas (DLSUD) and the Cavite chapter, she made this paper to determine the opportunities for social engagement of Business student leaders, specifically the Accountancy students who run as officers of JPIA.

The following questions were answered in this study:

- 1) What are the students' reasons in choosing to be an officer of JPIA?
- 2) Who influenced or invited them to be an officer of JPIA?
- 3) What activities have they participated in as officers of JPIA?

- 4) What activities have they initiated and managed as officers of JPIA?
- 5) What benefits did they get from these activities?
- 6) What recommendations can they give to JPIA to improve this student organization?

This study was based on the concept forwarded by Willms (2000) that engagement is the extent to which students identify with and value schooling outcomes, and participate in academic and non-academic school activities. Students join the junior affiliates of professional organizations and some become officers because doing so can provide them with opportunities for leadership and skill building that they will be able to use in their future careers. In that way, their learning will be more productive and functional. Another basis of the paper was the experiential learning theory used by Munoz, et al. (2016).

They asserted that this theory has been referenced as a possible method for attracting and retaining members in student organizations. In fact, they found out that students value activities that involve professional development and contact with professionals. These activities are made possible if the students belong to the junior affiliates of professional organizations.

## Methods

This study was a descriptive research that tried to identify the opportunities for social engagement of Business student leaders, specifically the Accountancy students who run as officers of JPIA. The main instrument used in this study was a survey questionnaire that was administered to the JPIA officers to determine their reasons for joining this organization, the activities that they initiated and participated in, and the benefits they derived from these activities.

The respondents were 62 officers of the JPIA from Region IV-A representing the following schools: De La Salle University–Dasmariñas (26), San Sebastian College Recoletos de Cavite (6), Cavite State University (6), Saint Dominic College of Asia (4), De La Salle Lipa (3), University of Perpetual Help System Dalta–Molino (3), Lyceum of the Philippines University–Cavite (2), Rogationist College (1), National College of Science and Technology (1), Polytechnic University of the Philippines–Alfonso (1), Malayan Colleges (1), Divine Word College of San Jose (1), Colegio de San Juan de Letran (1), and Tanauan Institute (1). There were 5 respondents who did not specify their school affiliation.

Out of the 62 respondents, six were second year students, 19 were third year, 27 were fourth year, and nine were fifth year. There was one respondent who did not specify his/her year level.

From these respondents, 11 were presidents, 20 were vice presidents, three were assistant vice presidents, two were secretary general, one was assistant secretary general, one was consul general, one was coordinator for outreach activities, 15 were members of the Board of Directors, and three were members of the Standing Committees. Five did not indicate their positions.

In terms of the length of their service to the association, 33 served for 1-2 years, 24 served for 2-3 years, and 4 served for 4-5 years. One did not indicate his/her length of service.

The data were statistically treated using frequency count and percentage.

## Results and Discussion

**Problem 1:** What are the students' reasons in choosing to be an officer of JPIA?

**Table 1:** Students' Reasons in Choosing to be an Officer of JPIA

Items	Frequency	Percentage
1. To develop my leadership and communication skills	55	88.71
2. To serve my fellow JPIAns	49	79.03
3. To get acquainted with people in the industry	25	40.32
4. To increase my chances of internship in established accounting firms	24	38.71

Table 1 shows that the main reason why students run as officers of JPIA is to develop their leadership and communication skills, as attested by 55 or 88.71% of the respondents. This is similar with the findings of Phillips, et al. (2015) that the students' interest in developing leadership skills has a large impact to 57% of the students that were surveyed. Leadership and communication were also included in the list of skills that being involved in organizations affected.

The other reasons were: to serve the other members of JPIA by 49 respondents or 79.03, to get acquainted with people in the industry by 25 respondents or 40.32%, and to increase chances of internship by 24 respondents or 38.71%.

**Problem 2:** Who influenced or invited them to be an officer of JPIA?

**Table 2:** Persons who Influenced or Invited the Students to Become Officers

Items	Frequency	Percentage
1. Department chair and/or college dean	8	12.90
2. JPIA adviser	6	9.68
3. JPIA officers	41	66.13
4. JPIA members	24	38.71
Others: oneself, family, friends, classmates		

It can be noted from Table 2 that majority of the respondents were influenced or invited by the current officers of the association, as answered by 41 respondents or 66.13%. Also a big number, 24 or 38.71%, were influenced or invited by the members of the association themselves. This shows that both the current officers and members of JPIA were scouting for people with leadership potential, hence the invitation given to certain people to run for office.

It is just unfortunate that inspite of the tremendous career development, skill-building, and professional networking opportunities that are made available by joining professional organizations as mentioned by Mata, et al. (2010), there were only few department chairs/deans

(8 or 12.90%) and faculty advisers (6 or 9.68%) who influenced these students to become JPIA officers.

**Problem 3:** What activities have they participated in as officers of JPIA?

**Table 3:** Activities Participated in by the Officers

Items	Frequency	Percentage
1. Leadership seminars	46	74.19
2. Regional and national seminars, conferences and conventions related to Accounting	34	54.84
3. Firm visits	9	14.52
4. Planning sessions with Accounting professionals	7	11.29
Others: Group meetings, sports fest, assembly, CMA seminar		

Table 3 indicates the activities participated in by the JPIA officers. On top of the list is their attendance to leadership seminars with 46 respondents or 74.19%. This is an indication that their main reason for running as officers of JPIA, to develop their leadership and communication skills, is achieved through the provision of opportunities to attend seminars that will develop their leadership skills, as emphasized Phillips, et al. (2015). This is one of the opportunities for social engagement made possible to these officers.

Second in the list is their attendance to regional and national seminars, conferences and conventions related to Accounting, as attested by 34 respondents or 54.84%. This is another opportunity for social engagement for these officers. There is a big possibility for networking and building connections because usually, the invited guest speakers are professionals in the field.

The other activities participated in by the officers can also be considered as social engagement opportunities: firm visits where they get to see the environment where they will eventually work in the future and planning sessions with Accounting professionals where they have the opportunity to share ideas with the professionals in their chosen career. Some members also mentioned attending group meetings, sports fests, assemblies, and CMA seminars. All these made the officers engage in discussion, whether formally or informally, with the professionals in their field.

**Problem 4:** What activities have they initiated and managed as officers of JPIA?

**Table 4:** Activities Initiated and Managed by the Officers

Items	Frequency	Percentage
1. General assemblies, seminars and conferences	45	72.58
2. Quiz bees and/or academic competitions	25	40.32
3. Sports fest and/or non-academic competitions	30	48.39
4. Outreach activities	17	27.42

From Table 4, it can be seen that the officers were able to initiate and manage the following activities: general assemblies, seminars and conference by 45 or 72.58% of the

respondents, quiz bees and/or academic competitions by 25 or 40.32%, sports fest and/or non-academic competitions by 30 or 48.39%, and outreach activities by 17 or 27.42%.

These activities initiated and managed by the JPIA officers may be considered as opportunities for the well-rounded development of the members of the association, which also served as venues for social engagements. They were in accordance with the objectives of their association: developing fellowship and solidarity through sports fest and other non-academic competitions; developing academic excellence and critical, analytical and constructive thinking through quiz bees and other academic competitions; developing organizational thinking through general assemblies, seminars and conference; and developing socio-civic and cultural consciousness through outreach activities.

**Problem 5:** What benefits did they get from these activities?

**Table 5:** Benefits Derived from JPIA Activities

Items	Frequency	Percentage
1. Fellowship and solidarity with other JPIA chapters	45	72.58
2. Social awareness through the different outreach activities	31	50.00
3. Introduction to the environment and activities of the Accounting profession	39	62.90
4. Inculcation of moral values central to the Accounting profession	36	58.06
Others: self-confidence, recognition of achievements inside and outside the school		

Table 5 shows the benefits derived by the officers from the JPIA activities. The highest number of the respondents, 45 or 72.58%, said that they cultivated fellowship and solidarity with other JPIA chapters. It means that their range of contacts increased through their association with the other provincial, regional and national chapters. This is a good opportunity for networking. There were 31 respondents or 50% who said that they developed social awareness through the different outreach activities. This is a good indication that the future accountants can readily participate in the corporate social responsibility (CSR) activities of their prospective companies. This is an indication that volunteerism is present in these students. There were 39 respondents or 62.90% who said that these activities introduced them to the environment and activities of the Accounting profession. This is important in enhancing their understanding of the profession and the issues it faces (in <http://ischool.sjsu.edu/current-students/resources/complimentary-student-memberships-professional-associations>). There were 36 respondents or 58.06% who said that they were able to inculcate moral values central to the Accounting profession. Since the Accounting profession is a delicate one dealing with money which normally tempts people, it is important that moral values be developed by the future accountants so that they will be trustworthy when they already start working.

The other benefits given by the respondents were the development of self-confidence and the recognition of achievements inside and outside the school. Slack and Murphy (1995) concluded in their study that students' participation in professional organizations is strongly associated with their confidence in their abilities to function as a member. This confidence will allow them to do a lot of other activities and to meet more people since they are secured in who they are as persons.

**Problem 6:** What recommendations can they give to JPIA to improve this student organization?

**Table 6:** Recommendations to JPIA

Items	Frequency	Percentage
1. Organize more events that will allow local chapters to share best practices and learn from one another	46	74.19
2. Conduct more seminars, conferences and conventions pertaining to the updates and changes in the Accounting profession	41	66.13
3. Develop programs that will help members and non-members improve their academic performance	43	69.35
4. Initiate more exposure activities in Accounting firms and other places of work of Accounting professionals	46	74.19
Others: balance academic and non-academic activities		

It can be noted from Table 6 that there were certain recommendations that the officers would like to give to JPIA to further improve their organization. First in the list is organizing more events that will allow local chapters to share best practices and learn from one another, as attested by 46 respondents or 74.19%. This will mean providing a venue for networking and learning from one another for the improvement of the management of the other local organizations. Improving the management of the organization will equate to better services to its members. There were 41 respondents or 66.13% who recommended the conduct of more seminars, conferences and conventions pertaining to the updates and changes in the Accounting profession. These activities will be important to the potential accountants to be ready for the challenges of their future job. These will provide them with opportunities to enhance their classroom learning through real-life talks about what is happening in the field of Accountancy. There is also a need to develop programs that will help members and non-members improve their academic performance, as recommended by 43 respondents or 69.35%. It has to be noted that Accountancy is one program with a very strict retention policy so any form of help for the improvement of the students' academic performance is always welcome. It also reflects the officers' belief in the importance of good academic standing, whether the students are members of the organization or not. There were 46 respondents or 74.19% who suggested to have more exposure activities in Accounting firms and other places of work of Accounting professionals. Aside from the opportunities for networking with professionals, exposure activities to places of work will orient the students to the true nature of their future profession. It will prepare these students to the demands of the profession as they see the professional accountants at work. Another recommendation given was the balance between academic and non-academic activities. The local chapters may look into the plan of activities they have and check if there is a balance between these activities. This will help in the holistic development of the Accountancy students.

## Conclusions

This study was conducted to identify the opportunities for social engagement of Business student leaders, specifically the Accountancy students who run as officers of JPIA. The main instrument used in this study was a survey questionnaire that was administered to 62 officers of JPIA from Region IV-A.

The study found out that there were a lot of opportunities for social engagement that were made available to the JPIA officers like leadership seminars, regional and national seminars, conferences and conventions related to Accounting, firm visits, planning sessions with Accounting professionals, general assemblies, academic and non-academic competitions, and outreach activities. These activities provided them with venues to network with other officers and develop contacts with the Accounting professionals. They were also introduced to the environment and activities of the Accounting profession. All these will be useful in their future job hunting.

The officers likewise developed the values of fellowship and solidarity with the other chapters, social awareness through the different outreach activities, as well as the moral values central to the Accounting profession.

## **Recommendations**

From this study, it is suggested that the recommendations given by the officers be disseminated to the different chapters for their implementation. These will help in improving their organization so that they can provide varied but balanced activities for the holistic development of their members.

It is also recommended that since membership in student or junior affiliates of a professional organization has proven beneficial to the student-members, there should be concerted efforts on the part of the faculty and school administrators to encourage their students to join these organizations.

Further, a similar study may be undertaken in the national level using a standardized instrument and inferential statistics to truly determine the importance of the students' social engagement through JPIA. The other student affiliates may conduct a similar study for their own organizations.

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